

Summer Reading (Prose)

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Practical Soup-Making

by Theodore Child, from *Delicate Feasting* (1890)

<http://www.archive.org/details/delicatefeasting00chilrich>

The cookery-books contain multitudes of recipes for making soups. We need not repeat them. In general, a cook who has the sentiment of his art will rarely follow precisely any recipe given in a book ; he will content himself with seeking ideas in books and carry them out according to his skill and feeling. Practice, experience, and work under good masters make the best cook. In Paris the women cooks often take lessons in the kitchens of the great clubs.

The life and soul of household cookery, the basis of a good, plain dinner, and of a host of stews, sauces, purees etc., is beef bouillon.

The first thing to learn to make is the pot-au-feu.

The result of the pot-au-feu must be savory, clear, and free from grease.

The operations of skimming and straining through a sieve are most important. In winter, bouillon may be kept for three days. In summer it must be made fresh every morning.

Directions for composing and manipulating the pot-au-feu and various bouillons and consommés will be found in " The Unrivalled Cook-Book" (Harper & Brothers), and in Mrs. Henderson's " Practical Cooking " (Harper Sc Brothers). In the same works will be found many hints for preparing soups, to which I beg to add the following simple soups, which are excellent if made with good materials and cooked with care.

Velvet Soup. — Cook some tapioca in good stock or bouillon, being careful not to make the liquid too thick. When ready place the yolks of eggs in the soup-tureen, one yolk for two persons. Then pour over them the tapioca, stirring the whole so that it may become

thoroughly mixed and uniformly creamy. A grain of nutmeg improves this soup.

Velvet Soup maigre, — This soup can be made without meat. Cook the tapioca in water, with a little pepper and salt. Put into the tureen a lump of butter and the yolks of eggs — two for three persons. Then pour over them the boiling tapioca. Stir up and serve.

I recommend to amateurs a shell-fish soup which I learned to make at Naples. The presence of garlic in its composition need alarm only the squeamish. Garlic is a noble flavor.

Shell-fish Soup. — Put into a stewpan some olive oil (half a tablespoonful for each person) and a little garlic finely chopped. When the garlic is well fried add some Tomato Sauce No. I (see Mrs. Henderson's " Practical Cooking," Harper & Brothers), half a tablespoonful for each person ; then put in your shell-fish — all sorts of small shell -fish, cockles, winkles, even mussels, etc., such as the market offers — well washed and brushed beforehand. Now add a spoonful of consomme for each person, a few cloves, and a little nutmeg. If your kitchen boasts no consomme you may use good bouillon^ strengthened with a little of Liebig's extract. When the soup has begun to tremble and throw up a few bubbles add a little more tomato ; let it boil awhile, and serve it clear with cubes of bread fried in oil. In order that the bread may still be crisp when eaten, the cubes, or croutons may be served apart, and some put into each plate just before the soup is ladled on them.

Henri Fourth's Poule-au-Pot . — The homely dish which Henri IV. wished each one of his subjects to enjoy on Sunday is not a soup, but it is one of those household dishes the making of which gives an excellent soup. Indeed, the poule-au-pot constitutes a meal of several courses.

Make a pot-au-feu (see " Unrivalled Cook-Book," p. 35, Harper & Brothers); only instead of beef use a piece of brisket of mutton, with the usual vegetables and savory herbs. Take a young hen and stuff it with the liver and a little fresh pork. When the pot-au-feu boils put in the hen and cook it tender. Serve the bouillon as soup ; the hen with salt and tomato-sauce ; bread the brisket of mutton, broil it on the gridiron, and serve with piquante sauce.

Mile. Frangoises Poule-au-Pot, — Take three pounds of beef, a big hen, two cabbages, pease, beans, 3rd pot-au-feu vegetables (see " Unrivalled Cook-Book," p. 35), a pound of raw ham, a Strasbourg or a Viennese saucisson, half a pound of bacon. Put the beef in first, without the vegetables, start the decoction, skim, and then put in the hen. When half-cooked take out the hen and put in all the vegetables, having previously put the following [^]rif[^]. or stuffing, into the cabbages:

Bread-crumbs, six eggs, a quarter of a pound of bacon, six chickens' livers, or the equivalent in calf's liver, ham, parsley, onions, a grain of garlic; chop all this up very fine, stuff it into the heart of the cabbages, and bind the leaves up with string before putting them into the pot.

Now take a stewpan and put into it some bacon cut up into small pieces, and then the half-cooked hen, and then brown the whole with butter. Make a brown sauce with butter and flour (see " Unrivalled Cook-Book," p. 395, " Roux "), enough to just cover the hen in the stewpan ; add a little uncooked rice, a dozen boiled onions, and let it stew until the rice bursts. Serve the poule-au-riz with the addition of a little nutmeg and cayenne, or with the sweet Hungarian paprika[^] if you have any.

The soup and the beef of this poule-aupot, served together with all the vegetables, constitute the "[^]Petite Marmite" that has become so popular in Parisian restaurants of

late years. In many restaurants little earthen mar mites, containing one or two portions, are served on the tables, and in each marmite is a small fragment of beef, pieces of all the vegetables, and a portion of the clear bouillon.

Soup is really good only when it is eaten hot. Its warmth is an essential part of its excellence, and prepares the stomach for the important functions of the digestion of the succeeding and more substantial courses.

The soup-plates should be hot, and the soup-tureen should be heated before the soup is poured into it. At a truly scientific table the spoons and ladles ought to be heated.

Now, let us suppose a dinner of nine persons. If the host or hostess serves the soup, the last guest served will begin to use his spoon when the first served has finished, unless, out of politeness, all wait until the last is served, and then attack all together. If the soup is served from the side, and one or two servants pass the plates, the result will be the same. In both cases, during the time required to fill nine plates and pass them, there will be a loss of heat, and the beginning of the dinner will be wanting in unison. The best way is to serve the soup in hot plates immediately before the dinner is announced. Then the guests enter the dining-room, take their seats, and begin to dine all at the same time and in perfect unison.

The Origin of “Masks” in the Italian Comedy

From the *'Memoirs of Carlo Goldoni'*

http://www.gutenberg.org/files/33624/33624-h/33624-h.htm#THE_ORIGIN_OF_MASKS_IN_THE_ITALIAN_COMEDY

The amateurs of the old comedy, on seeing the rapid progress of the new, declared everywhere that it was unworthy of an Italian to give a blow to a species of comedy in which Italy had attained great distinction, and which no other nation had ever yet been able to imitate. But what made the greatest impression on the discontented was the suppression of masks, which my system appeared to threaten. It was said that these personages had for two centuries been the amusement of Italy, and that it ought not to be deprived of a species of comic diversion which it had created and so well supported.

Before venturing to give any opinion on this subject, I imagine the reader will have no objection to listen for a few minutes to a short account of the origin, employment, and effects of these four masks. Comedy, which in all ages has been the favorite entertainment of polished nations, shared the fate of the arts and sciences, and was buried under the ruins of the Empire during the decay of letters. The germ of comedy, however, was never altogether extinguished in the fertile bosom of Italy. Those who first endeavored to bring about its revival, not finding in an ignorant age writers of sufficient skill, had the boldness to draw out plans, to distribute them into acts and scenes, and to utter extempore the subjects, thoughts, and witticisms which they had concerted among themselves. Those who could read (and neither the great nor the rich were of the number) found that in the comedies of Plautus and Terence there were always duped fathers, debauched sons, enamored girls, knavish servants, and mercenary maids; and, running over the different districts of Italy, they took the fathers from Venice and Bologna, the servants from Bergamo, and the lovers and waiting-maids from the dominions of Rome and Tuscany. Written proofs are not to be expected of what took place in a time when writing was not in use; but I prove my assertion in this way: Pantaloon has always been a Venetian, the Doctor a Bolognese, and Brighella and Harlequin Bergamasks; and from these places, therefore, the comic personages called the four masks of the Italian comedy were taken by the players. What I say on this subject is not altogether the creature of my imagination; I possess a manuscript of the [Pg 6482] fifteenth century, in very good preservation and bound in parchment, containing a hundred and twenty subjects or sketches of Italian pieces, called comedies of art, and of which the basis of the comic humor is always Pantaloon, a Venetian merchant; the Doctor, a Bolognese jurisconsult; and Brighella and Harlequin, Bergamask valets,—the first clever and sprightly, and the other a mere dolt. Their antiquity and their long existence indicate their origin.

With respect to their employment, Pantaloon and the Doctor, called by the Italians the two old men, represent the part of fathers, and the other parts where cloaks are worn. The first is a merchant, because Venice in its ancient times was the richest and most extensively commercial country of Italy. He has always preserved the ancient Venetian costume; the black dress and the woolen bonnet are still worn in Venice; and the red under-waistcoat and breeches, cut out like drawers, with red stockings and slippers, are a most exact representation of the equipment of the first inhabitants of the Adriatic marshes. The beard, which was considered as an ornament in those remote ages, has been caricatured and rendered ridiculous in subsequent periods.

The second old man, called the Doctor, was taken from among the lawyers, for the sake of opposing a learned man to a merchant; and Bologna was selected because in that city there existed a university, which, notwithstanding the ignorance of the times, still preserved the offices and emoluments of the professors. In the dress of the Doctor we observe the ancient costume of the university and bar of

Bologna, which is nearly the same at this day; and the idea of the singular mask which covers his face and nose was taken from a wine stain which disfigured the countenance of a jurisconsult in those times. This is a tradition still existing among the amateurs of the comedy of art.

Brighella and Harlequin, called in Italy the two Zani, were taken from Bergamo; because, the former being a very sharp fellow and the other a stupid clown, these two extremes are only to be found among the lower orders of that part of the country. Brighella represents an intriguing, deceitful, and knavish valet. His dress is a species of livery; his swarthy mask is a caricature of the color of the inhabitants of those high mountains, tanned by the heat of the sun. Some comedians, in this character, have taken the name of Fenocchio, Fiqueto, and Scapin; but they [Pg 6483] have always represented the same valet and the same Bergamask. The harlequins have also assumed other names: they have been sometimes Tracagnins, Truffaldins, Gradelins, and Mezetins; but they have always been stupid Bergamasks. Their dress is an exact representation of that of a poor devil who has picked up pieces of stuffs of different colors to patch his dress; his hat corresponds with his mendicity, and the hare's tail with which it is ornamented is still common in the dress of the peasantry of Bergamo.

I have thus, I trust, sufficiently demonstrated the origin and employment of the four masks of the Italian comedy; it now remains for me to mention the effects resulting from them. The mask must always be very prejudicial to the action of the performer, either in joy or sorrow: whether he be in love, cross, or good-humored, the same features are always exhibited; and however he may gesticulate and vary the tone, he can never convey by the countenance, which is the interpreter of the heart, the different passions with which he is inwardly agitated. The masks of the Greeks and Romans were a sort of speaking-trumpets, invented for the purpose of conveying the sound through the vast extent of their amphitheatres. Passion and sentiment were not in those times carried to the pitch of delicacy now actually necessary. The actor must in our days possess a soul; and the soul under a mask is like a fire under ashes. These were the reasons which induced me to endeavor the reform of the Italian theatre; and to supply the place of farces with comedies. But the complaints became louder and louder: I was disgusted with the two parties, and I endeavored to satisfy both; I undertook to produce a few pieces merely sketched, without ceasing to give comedies of character. I employed the masks in the former, and I displayed a more noble and interesting comic humor in the others: each participated in the species of pleasure with which they were most delighted; with time and patience I brought about a reconciliation between them; and I had the satisfaction at length to see myself authorized in following my own taste, which became in a few years the most general and prevailing in Italy. I willingly pardoned the partisans of the comedians with masks the injuries they laid to my charge; for they were very able amateurs, who had the merit of giving themselves an interest to sketched comedies.

Window Glass in the Making: An Art, A Craft, A Business (1926)

Author: American Window Glass Co. William L. Monro

<http://www.archive.org/details/WindowGlassInTheMakingAnArtACraftABusiness>

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GLASS— ITS ORIGIN

THE origin of glass is still in doubt. Many-theories have been advanced by ancient and modern writers to explain its discovery, but they can, at most, simply recount what tradition tells. Some writers say that the Egyptians discovered glass; others claim it was a discovery of the Chinese. Probably the most accurate account of its origin, and certainly a very plausible one is that related by C. Pliny the Second in his "History of the World," Volume 36, Chapter 27. According to Pliny, there was in Phoenicia a short river, called Belus, that flowed from Lake Candeboea to the sea. Its waters were muddy and unwholesome, and nothing was to be found on its banks but sand. This had been cast up by the sea, and from frequent washings by the waves was pure and white and suitable for making glass.

One day some traders, who had been gathering a cargo of nitre, sought, along the banks of the river, stones on which to mount a tripod to cook their food. Not finding any, they were obliged to use blocks of nitre taken from their cargo. Under the heat of the fire, the sand coming into contact with the nitre, which acted as a flux, formed a vitreous substance— "glass. "

Though there is room to doubt that this is the true account of the origin of glass, there are certain basic features in it that make it appear not only plausible but easily possible. From our later knowledge, we know that sand alone may be fused into a vitreous mass by applying a very high degree of heat; and that by mixing with it a quantity of soda, the temperature required to do this is greatly lessened. By using nitre, which contains a large percentage of soda, these ancient traders used an ingredient that materially lowered the melting point of the sand and made possible its reduction into glass.

To demonstrate the possibility of the discovery of glass in some such manner, we recently caused a wood fire to be made in the open air. Small logs were laid on a bed of glass sand mixed with an equal quantity of carbonate of soda. In order to secure accurate information of the degree of heat that could be obtained from such a fire, a standard pyrometer couple was inserted into the bed, and frequent readings taken. The fire was kept burning about two hours. The highest reading, 2210 degrees Fahrenheit, was obtained when the fire had been reduced to a mass of burning charcoal. After the fire had completely burned itself out, the wood ashes were removed and a portion of the bed was found to be fused into a vitreous mass — the same kind of glass discovered by the Phoenicians. In a similar demonstration, with a bed of glass sand mixed with an equal quantity of nitre, a like result was obtained; but when a bed of glass sand unmixed with any other ingredients was used and subjected to the same kind of a fire, there was not the slightest trace of any fusing of the sand.

It seems quite plausible, therefore, that glass was first made somewhere along the shore of the sea. Many centuries after Pliny, it was found that when seaweed was burned, its residuum, called "kelp," contained a large amount of carbonate of soda. Subsequently this was used in making glass, and there became known to the trade the term, "kelp glass."

It requires no great stretch of the imagination to think that at some time there had been kindled along a sandy shore a great bonfire of dry seaweed, with perhaps a lot of driftwood, which left amid its charred embers the vitreous mass we now call glass.

Owing to the impurity of the raw materials and to the cruder methods of manufacture, the glass made by the ancients was not the bright, clear, transparent article in use today, but was much darker and contained many bubbles and foreign particles, which made it more translucent than transparent. Saint Paul refers to this feature when he says, "For now we see through a glass, darkly" — I Cor., xiii, 12.

Centuries elapsed before this discovery by the Phoenicians was put to any practical use. In fact, we may say that glass really had to be rediscovered before glass articles of any kind could be produced. While it is not the intention to go into the history of glass making, the story of its origin is recounted for the bearing it has on the development of the various compositions subsequently used in making window glass.

Memorandums of a Month's Tour in Sicily

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THE MUSEUM OF PALERMO.

The museum of Palermo is a small but very interesting collection of statues and other sculpture, gathered chiefly, they say, from the ancient temples of Sicily, with a few objects bestowed out of the superfluities of Pompeii. In the lower room are some good bas-reliefs, to which a story is attached. They were discovered fifteen years ago at *Selinuntium* by some young Englishmen, the reward of four months' labour. Our guide, who had been also theirs, had warned them not to stay after the month of June, when malaria begins. They did stay. All (four) took the fever; one died of it in Palermo, and the survivors were deprived by the government--that is, by the king--of the spoils for which they had suffered so much and worked so hard. No one is permitted to excavate without royal license; *excavation* is, like *Domitian's fish*, *res fisci*. Even Mr Fagan, who was consul at Palermo, having made some interesting underground discoveries, was deprived of them. We saw here a fine Esculapius, in countenance and expression exceedingly like the *Ecce Homo* of Leonardo da Vinci, with all that god-like compassion which the great painter had imparted without any sacrifice of dignity. He holds a poppy-head, which we do not recollect on his statue or gems, and the Epidaurian snake is at his side. Up-stairs we saw specimens of fruits from Pompeii, barley, beans, the carob pod, pine kernels, as well as bread, sponge, linen: and the sponge was obviously such, and so was the linen. A bronze Hercules treading on the back of a stag, which he has overtaken and subdued, is justly considered as one of the most perfect bronzes discovered at Pompeii. A head of our Saviour, by Corregio, is exquisite in conception, and such as none but a person long familiar with the physiognomy of suffering could have accomplished. These are exceptions rather than specimens. The pictures, in general, are poor in interest; and a long gallery of *casts* of the *chef-d'oeuvres* of antiquity possessed by the capitals of Italy, Germany, England, and France, looks oddly here, and shows the poverty of a country which had been to the predatory proconsuls of Rome an inexhaustible repertory of the highest treasures of art. A VERRES REDIVIVUS would now find little to carry off but toys made of amber, lava snuff-boxes, and WODEHOUSE'S MARSALA--one of which he certainly would not guess the *age* of, and the other of which he would not *drink*.

LUNATIC ASYLUM.

We saw nothing in this house or its arrangements to make us think it superior, or very different from others we had visited elsewhere. The making a lunatic asylum a show-place for strangers is to be censured; indeed, we heard Esquirol observe, that nothing was so bad as the admission of many persons to see the patients at all; for that, although some few were better for the visits of friends, it was injurious as a general rule to give even friends admittance, and that it ought to be left discretionary with the physician, when to admit, and whom. Cleanliness, good fare, a garden, and the suppression of all violence--these have become immutable canons for the conduct of such institutions, and fortunately demand little more than ordinary good feeling and intelligence in the superintendent. But we could not fail to observe a sad want of suitable inducement to occupation, which was apparent throughout this asylum. That not above one in ten could read, may perhaps be thought a light matter, for few can be the resources of insanity in books; yet we saw at Genoa a case where it had taken that turn, and as it is occupation to read, with how much profit it matters not. Not one woman in four, as usually occurs in insanity, could be induced to dress according to her sex; they figured away in men's coats and hats! The dining-room was hung with portraits of some merit, by one of the lunatics; and we noticed that every face, if indeed all are portraits, had some insanity in it. They have a dance every Sunday evening. What an exhibition it must be!

MISCELLANEA

That the vegetation of Palermo excels that of Naples, partly depends on the superior intelligence of the agriculturist, and partly upon soil and climate: the fruits here are not only more advanced, but finer in quality. We left a very meagre dessert of cherries beginning to ripen at Naples; the very next day, a superabundance of very fine and mature ones were to be had on all the stalls of Palermo. This must be the result of industry and care in a great measure; for on leaving that city, after a séjour of three weeks, for Messina, Catania, and Syracuse, although summer was much further advanced, we relapsed into miserably meagre supplies of what we had eaten in perfection in the capital; yet Syracuse and Catania are much warmer than Palermo.

The vegetables here are of immense growth. The fennel root (and there is no better test of your whereabouts in Italy) is nearly twice as large as at Naples, and weighs, accordingly, nearly double. The cauliflowers are quite colossal; and they have a blue cabbage so big that your arms will scarcely embrace it. We question, however, whether this hypertrophy of fruit or vegetables improves their

flavour; give us _English vegetables_ --ay, and _English fruit_. Though Smyrna's _fig_ is eaten throughout Europe, and Roman _brocoli_ be without a rival; though the _cherry_ and the Japan _medlar_ flourish only at Palermo, and the _cactus_ of Catania can be eaten nowhere else; what country town in England is not better off on the whole, if quality alone be considered? But we have one terrible drawback; for _whom_ are these fruits of the earth produced? Our _prices_ are enormous, and our supply scanty; could we _forget this_, and the artichoke, the asparagus, the peas and beans of London and Paris, are rarely elsewhere so fine. To our palates the _gooseberry_ and the _black currant_ are a sufficient indemnity to Britain for the _grape_, merely regarded as a fruit to _eat_. Pine-apples, those "illustrious foreigners," are so successfully _petted_ at home, that they will scarcely condescend now to flourish out of England. _Nectarines_ refuse to ripen, and _apricots_ to have any taste elsewhere. Our _pears_ and _apples_ are better, and of more various excellence, than any in the world. And we really prefer our very figs, grown on a fine _prebendal_ wall in the close of _Winchester_, or under _Pococke's_ window in a canon's garden at _chilly Oxford_. Thus has the kitchen-garden refreshed our patriotism, and made us half ashamed of our long forgetfulness of home. But there are good things abroad too for poor men; the rich may live any where. An enormous salad, crisp, cold, white, and of delicious flavour, for a halfpenny; olive oil, for fourpence a pound, to dress it with; and wine for fourpence a gallon to make it disagree with you;[15] fuel for almost nothing, and bread for little, are not small advantages to frugal housekeepers; but, when dispensed by a despotic government, where one must read those revolting words _motu proprio_ at the head of every edict, let us go back to our carrots and potatoes, our Peels and our income-tax, our fogs and our frost. The country mouse came to a right conclusion, and did not like the fragments of the feast with the cat in the cupboard--

Give me again my hollow tree,
My crust of bread, and liberty."

[Footnote 15:

----*Lactuca innatat acri*
Post vinum stomacho.--HOR.]

Fish, though plentiful and various, is not fine in any part of the _Mediterranean_; and as to _thunny_, one surfeit would put it out of the bill of fare for life. On the whole, though at Palermo and Naples the pauper starves not in the streets, the gourmand would be sadly at a loss in his requisition of delicacies and variety. Inferior bread, at a penny a pound, is here considered palatable by the sprinkling over of the crust with a small rich seed (_jugulena_) which has a flavour like the almond; it is also strewn, like our caraway seeds in

biscuits, into the paste, and is largely cultivated for that single use. The capsici, somewhat similar in flavour to the pea, are detached from the radicles of a plant with a flower strikingly like the potatoe, and is used for a similar purpose to the jugulena.

This island was the granary of Athens before it nourished Rome; and wheat appears to have been first raised in Europe on the plains of eastern Sicily. In Cicero's time it returned eightfold; and to this day one grain yields its eightfold of increase; which, however, is by a small fraction less than our own, as given by M'Culloch in his "Dictionary of Commerce." We plucked some siligo, or bearded wheat, near Palermo, the beard of which was eight inches long, the ear contained sixty grains, eight being also in this instance the average increase; how many grains, then, must perish in the ground!

In Palermo, English gunpowder is sold by British sailors at the high price of from five to seven shillings per English pound; the "Polvere nostrale" of the Sicilians only fetches 1s. 8d.; yet such is the superiority of English gunpowder, that every one who has a passion for popping at sparrows, and other Italian sports, (complimented by the title of La caccia.) prefers the dear article. When they have killed off all the robins, and there is not a twitter in the whole country, they go to the river side and shoot gudgeons.

The Palermo donkey is the most obliging animal that ever wore long ears, and will carry you cheerfully four or five miles an hour without whip or other encouragement. The oxen, no longer white or cream-coloured, as in Tuscany, were originally importations from Barbary, (to which country the Sicilians are likewise indebted for the mulberry and silk-worm.) Their colour is brown. They rival the Umbrian breed in the herculean symmetry of their form, and in the possession of horns of more than Umbrian dimensions, rising more perpendicularly over the forehead than in that ancient race. The lizards here are such beautiful creatures, that it is worth while to bring one away, and, to pervert a quotation, "UNIUS Dominum sese fecisse LACERTAE." Some are all green, some mottled like a mosaic floor, others green and black on the upper side, and orange-coloured or red underneath. Of snakes, there is a Coluber niger from four to five feet in length, with a shining coat, and an eye not pleasant to watch even through glass; yet the peasants here put them into their Phrygian bonnets, and handle them with as much sang-froid as one would a walking-stick.

The coarse earthen vessels, pitchers, urns, &c., used by the peasants, are of the most beautiful shapes, often that of the ancient amphora; and at every cottage door by the road-side you meet with this vestige of the ancient arts of the country.

The plague which visited Palermo in 1624 swept away 20,000 inhabitants; Messina, in 1743, lost 40,000. The cholera, in 1837, destroyed 69,253 persons. The present population of the whole island is 1,950,000; the female exceeds the male by about three per cent, which is contrary to the general rule. It is said that nearly one-half the children received into the foundling hospital of Palermo die within the first year.

Formerly the barons of Sicily were rich and independent, like our English gentlemen; but they say that, since 1812, the king's whole pleasure and business, as before our *_Magna Charta_* times, have been to lower their importance. In that year a revolt was the consequence of an income-tax even of two per cent, for they were yet unbroken to the yoke; but now that he has saddled property with a deduction, *_said_* to be eventually equal to fifteen per cent, if not more; now that he doubles the impost on the native sulphur, which is therefore checked in its sale; now that he keeps an army of 80,000 men to play at soldiers with; now that he constitutes himself the only referee even in questions of commercial expediency, and *_a fortiori_* in all other cases, which he settles *_arbitrarily_*, or does not settle at all; now that he sees so little the signs of the times, that he will not let a professor go to a science-congress at Florence or Bologna without an express permission, and so ignorant as to have *_refused_* that permission for fear of a political bias; now that he diverts a nation's wealth from works of charity or usefulness, to keep a set of foreigners in his pay--they no doubt here remember in their prayers, with becoming gratitude, "the holy alliance," or, as we would call it, the *_mutual insurance company of the kings of Europe_*, of which Castlereagh and Metternich were the honorary secretaries.

In the midst of all the gloomy despotism, beautiful even as imagination can paint it, is Palermo beautiful! One eminent advantage it possesses over Naples itself--its vicinity presents more "drives;" and all the drives here might contest the name given to one of them, which is called "*_Giro delle Grazie_*," (the Ring or Mall of the Graces.) It has a *_Marina_* of unrivaled beauty, to which the noblesse and the citizens repair and form a promenade of elegant equipages. A fine pavement for foot passengers is considerably raised three or four feet above the carriage road; so that the walking population have nothing to annoy them. The sea is immediately below both, and you see the little rock-encircled bays animated with groups of those sturdy fishermen with bare legs; which you admire in Claude and Salvator, throwing before them, with admirable precision, their *_épervier_* net, whose fine wrought meshes sometimes hang, veil-like, between you and the ruddy sunset, or plashing, as they fall nightly into the smooth sea, contribute the pleasure of an agreeable sound to the magic of the scenery. Some take the air on donkeys, which go at a great rate; some are mounted on Spanish mules, all mixed together freely amidst handsome and numerous equipages; and the whole is

backed by a fine row of houses opposite the sea, built after the fashion of our terraces and crescents at watering-places. And finally, that blue _æquor_, as it now deserves to be termed, studded over with thunny boats and coasting craft with the haze latine sail, that we should be sorry to trust in British hands, is walled in by cliffs so bold, so rugged, and standing out so beautifully in relief, that for a moment we cannot choose but envy the citizen of _Panormus_. But we may not tarry even here; _we have more things_ to see, and every day is getting hotter than the last.

JOURNEY TO SEGESTE.

Leaving Palermo early, we pass _Monreale_ in our way to the Doric columns of _Segeste_, and find ourselves, before the heat of day has reached its greatest intensity, at a considerable elevation above the plain on which the capital stands, amidst mountains which, except in the difference of their vegetation, remind us not a little of the configuration of certain wild parts of the Highlands, where Ben Croachin flings his dark shadow across Loch Awe. Indeed, we were thinking of this old and favourite fishing haunt with much complacency, when two men suddenly came forth from behind the bristly aloes and the impenetrable cactus--ill-looking fellows were they; but, moved by the kindest intentions for our safety, they offer to conduct us through the remainder of the defile. This service our hired attendant from Palermo declined, and we push on unmolested to Partenico, our halting-place during the heat of the day. It is a town of some extent, large enough to afford two fountains of a certain pretension, but execrably dirty within. Twelve thousand inhabitants has Partenico, and five churches. Out of its five locandas, who shall declare the worst? Of that in which we had first taken refuge, (as, in a snow-storm on the Alps, any _roof_ is Paradise,) we were obliged to quit the shelter, and walk at _noon_, at _midsummer_, and in _Sicily_, a good mile _up_ a main street, which, beginning in habitations of the dimensions of our almshouses, ends in a few huts intolerably revolting, about which troops of naked children defy vermin, and encrust themselves in filth. At one door we could not help observing that worst form of _scabies_, the _gale à grosses bulles_; so we had got, it appeared, from _Scylla_ into _Charybdis_, and were in the very preserves of Sicilian _itch_, and we prognosticate it will spread before the month expires wherever human skin is to be found for its entertainment. Partenico lies in a scorching plain full of malaria. Having passed the three stifling hours of the day here, we proceed on our journey to _Alcamo_, a town of considerable size, which looks remarkably well from the plain at the distance of four miles--an impression immediately removed on passing its high rampart gate. Glad to escape the miseries with which it threatens the _détenu_, we pass out at the other end, and zigzag down a hill of great beauty, and commanding such views of sea and

land as it would be quite absurd to write about. Already a double row of aloë, planted at intervals, marks what is to be your course afar off, and is a faithful guide till it lands you in a Sicilian plain. This is the highest epithet with which any plain can be qualified. This is indeed the month for Sicily. The goddess of flowers now wears a morning dress of the newest spring fashion; beautifully made up is that dress, nor has she worn it long enough for it to be sullied ever so little, or to require the washing of a shower. A delicate pink and a rich red are the colours which prevail in the tasteful pattern of her voluminous drapery; and as she advances on you with a light and noiseless step, over a carpet which all the looms of Paris or of Persia could not imitate, scattering bouquets of colours the most happily contrasted, and impregnating the air with the most grateful fragrance, we at once acknowledge her beautiful impersonation in that "monument of Grecian art," the Farnese Flora, of which we have brought the fresh recollection from the museum of Naples.

The Erba Bianca is a plant like southernwood, presenting a curious hoar-frosted appearance as its leaves are stirred by the wind. The Rozzolo a vento is an ambitious plant, which grows beyond its strength, snaps short upon its overburdened stalk, and is borne away by any zephyr, however light. Large crops of oats are already cut; and oxen of the Barbary breed, brown and coal-black, are already dragging the simple aboriginal plough over the land. Some of these fine cattle (to whom we are strangers, as they are to us) stood gazing at us in the plain, their white horns glancing in the sun; others, recumbent and ruminating, exhibit antlers which, as we have said before, surpass the Umbrian cattle in their elk-like length and imposing majesty. Arrived at the bottom of our long hill, we pass a beautiful stream called Fiume freddo, whose source we track across the plain by banks crowned with Cactus and Tamarisk. Looking back with regret towards Alcamo, we see trains of mules, which still transact the internal commerce of the country, with large packsaddles on their backs; and when a halt takes place, these animals during their drivers' dinner obtain their own ready-found meal, and browse away on three courses of vegetables and a dessert.

SICILIAN INNS.

"A beautiful place this Segeste must be! One could undergo any thing to see it!" Such would be the probable exclamation of more than one reader looking over some landscape annual, embellished with perhaps a view of the celebrated temple and its surrounding scenery; but find yourself at any of the inexpressibly horrid inns of Alcamo or Calatafrini, (and these are the two principal stations between Palermo and Segeste--one with its 12,000, the other with its 18,000 inhabitants;) let us walk you down the main street of either,

and if you don't wish yourself at Cheltenham, or some other unclassical place which never had a Latin name, we are much mistaken! The "Relievo dei Cavalli" at Alcamo offers no relief for you! The Magpie may prate on her sign-post about clean beds, for magpies can be made to say any thing; but pray do not construe the "Canova Divina" Divine Canova! He never executed any thing for the Red Lion of Calatafrini, whose "Canova" is a low wine-shop, full of wrangling Sicilian boors. Or will you place yourself under the Eagle's wing, seduced by its nuovi mobili e buon servizio? Oh, we obtest those broken window-panes whether it be not cruel to expose new furniture to such perils! For us we put up at the "Temple of Segeste," attracted rather by its name than by any promise or decoy it offers. Crabbe has given to the inns at Aldborough each its character: here all are equal in immundicity, and all equally without provisions. Some yellow beans lie soaking to soften them. There is salt-cod from the north, moist and putrid. There is no milk; eggs are few. The ham at the Pizzicarolo's is always bad, and the garlicked sausage repulsive. Nothing is painted or white-washed, let alone dusted, swept, or scoured. The walls have the appearance of having been pawed over by new relays of dirty fingers daily for ten years. This is a very peculiar appearance at many nasty places out of Sicily, and we really do not know its pathology. You tread loathingly an indescribable earthen floor, and your eye, on entering the apartment, is arrested by a nameless production of the fictile art, certainly not of Etruscan form, which is invariably placed on the bolster of the truck-bed destined presently for your devoted head. Oh! to do justice to a Sicilian locanda is plainly out of question, and the rest of our task may as well be sung as said, verse and prose being alike incapable of the hopeless reality:--

"Lodged for the night, O Muse! begin
To sing the true Sicilian inn,
Where the sad choice of six foul cells
The least exacting traveller quells
(Though crawling things, not yet in sight,
Are waiting for the shadowy night,
To issue forth when all is quiet,
And on your feverish pulses riot;)
Where one wood shutter scrapes the ground,
By crusts, stale-bones, and garbage bound;
Where unmolested spiders toil
Behind the mirror's mildew'd foil;
Where the cheap crucifix of lead
Hangs o'er the iron tressel'd bed;
Where the huge bolt will scarcely keep
Its promise to confiding sleep,
Till you have forced it to its goal
In the bored brick-work's crumbling hole;
Where, in loose flakes, the white-wash peeling

From the bare joints of rotten ceiling,
Give token sure of vermin's bower,
And swarms of bugs that bide their hour!
Though bands of fierce musquittos boom
Their threatening bugles round the room,
To bed! Ere wingless creatures crawl
Across your path from yonder wall,
And slipper'd feet unheeding tread
We know not what! To bed! to bed!
What can those horrid sounds portend?
Some waylaid traveller near his end,
From ghastly gash in mortal strife,
Or blow of bandit's blood-stained knife?
No! no! They're bawling to the _Virgin_,
Like victim under hands of surgeon!
From lamp-lit _daub_, proceeds the cry
Of that unearthly litany!
And now a train of mules goes by!

"One wretch comes whooping up the street
For whooping's sake! And now they beat
Drum after drum for market mass,
Each day's transactions on the _place!_
All things that go, or stay, or come,
They herald forth by tuck of drum.
Day dawns! a tinkling tuneless bell,
Whate'er it be, has news to tell.
Then twenty more begin to strike
In noisy discord, all alike;--
Convents and churches, chapels, shrines,
In quick succession break the lines.
Till every gong in town, at last
Its tongue hath loos'd, and sleep is past.
So much for nights! New days begin,
Which land you in another Inn.
O! he that means to see _Girgenti_
Or _Syracuse!_--needs patience plenty!"

Crossing a rustic bridge, we pass through a garden (for it is no less, though man has had no spade in it) of pinks, marigolds, cyclamens, and heart's-ease, &c. &c.; the moist meadow land below is a perfect jungle of lofty grasses, all fragrant and in flower, gemmed with the unevaporated morning dew, and colonized with the _Aphides_, *Alticae*, and swarms of the most beautiful butterflies clinging to their stalks. _Gramina læta_ after Virgil's own heart, were these. Their elegance and unusual variety were sufficient to throw a botanist into a perfect HAY fever, and our own first paroxysm only went off, when, after an hour's hard collecting, we came to a place which demanded _another_ sort of enthusiasm; for THERE stood without

a veil the _Temple of Segeste_, with one or two glimpses of which we had been already astonished at a distance, in all its Dorian majesty! This almost unmutilated and glorious memorial of past ages here reigns alone--the only building far or near visible in the whole horizon; and what a position has its architect secured! In the midst of hills on a bit of table-land, apparently made such by smoothing down the summit of one of them, with a greensward in front, and set off behind by a mountain background, stands this eternal monument of the noblest of arts amidst the finest dispositions of nature. There is another antiquity of the place also to be visited at Segeste--its _theatre_; but we are too immediately below it to know any thing about it at present, and must leave it in a parenthesis. To our left, at the distance of eight miles, this hill country of harmonious and graceful undulation ends in beetling cliffs, beneath which the sea, now full in view, lies sparkling in the morning sunshine. We shall never, never forget the impressions made upon us on first getting sight of Segeste! _Pæstum_ we had seen, and thought that it exhausted all that was possible to a temple, or the site of a temple.

Awe-stricken had we surveyed those monuments of "immemorial antiquity" in that baleful region of wild-eyed buffaloes and birds of prey--temples to death in the midst of his undisputed domains! We had fully adopted Forsyth's sentiment, and held Pæstum to be probably the most impressive monument on earth; but here at Segeste a nature less austere, and more RIANTE in its wildness, lent a quite different charm to a scene which could scarcely be represented by art, and for which a reader could certainly not be _prepared_ by description. We gave an antiquarian's devoutest worship to this venerable survivor of 2000 years, and of many empires--we _felt_ the vast masses of its time-tried Doric, and even the wild flowers within its precincts, its pink valerians; its _erba di vento_, its scented wallflower. The whole scene kept our admiration long tasked, but untired. A smart shower compelled us to seek shelter under the shoulder of one of the grey entablatures: it soon passed away, leaving us a legacy of the richest fragrance, while a number of wild birds of the hawk kind, called "chaoli" from their shrill note, issued from their hiding-places, and gave us wild music as they scudded by!

A few bits of wall scattered over the corn-fields are all that now remains of the dwellings of the men who built this temple for their city, and who, by its splendour, deluded the Athenians into a belief of greater wealth than they possessed.

Our ascent to the theatre, the day after, proved to be a very steep one, of half an hour on mule-back; in making which, we scared two of those prodigious birds, the _ospreys_, who, having reconnoitred us, forthwith began to wheel in larger and larger sweeps, and at last made off for the sea. We found the interior of the theatre occupied by an audience ready for our arrival; it consisted of innumerable _hawks_, the chaoli just mentioned, which began to scream at our

intrusion. The ospreys soon returned, and were plainly only waiting our departure to subside upon their solitary domain. We would not be a soft-billed bird for something in this neighbourhood; no song would save them from the hawks' supper. Having luxuriated on the 24th of May for full four hours in this enchanting neighbourhood, we were sorry to return to our inn--and such an inn! We departed abruptly, and probably never to return; but we shall think of Segeste in Hyde Park, or as we pass the candlestick Corinthians of Whitehall.

Thucydides[16] relates that a prevailing notion in his time was, that the _Trojans_ after losing _Troy_ went first to _Sicily_, and founded there Egesta and Eryx. Now, as on the same authority the first _Greek_ colony was _Naxos_, also in Sicily, Greeks and Trojans (strange coincidence!) must have _met again_ on new ground after the _Iliad_ was all acted and done with, like a tale that is told.

[Footnote 16: _Vide_ THUCYDIDES, Book iv. chap. 15.]

On our return towards Palermo, one of our party having a touch of ague, we crossed the street to the apothecary, (at Calatafrini, our night's halt,) and smelling about his musty galenicals, amidst a large supply of _malvas_ which were drying on his counter, the only wholesome-looking thing amidst his stores, we asked if he had any _quinine_. "_Sicuro!_" and he presented us with a white powder having a slightly bitter taste, which, together with an ounce of green tea, to be dispensed in pinches of five grains on extraordinary occasions, comes, he says, from the East. On our observing that the quinine, if such at all, was adulterated, and that this was too bad in a country of malaria, where it was the poor man's only protection, he looked angry; but we rose in the esteem of peasants in the shop, who said to each other--"Ed ha ragione il Signor." Wanting a little _soda_, we were presented with sub-carbonate of potash as the nearest approach to it--a substitution which suggested to us a classical recollection from Theocritus; namely, that in this same Sicily, 2000 years ago, a Syracusan husband is rated by his dame for sending her _soda_ for her washing in place of potash, the very converse of what our old drug-vender intended to have washed our inside withal.

The Roman Catholic religion patronises painting oddly here; not a cart but is adorned with some sacred subject. Every wretched vehicle that totters under an unmerciful load, with one poor donkey to draw six men, has its picture of _Souls in Purgatory_, who seem putting their hands and heads out of the flames, and vainly calling on the ruffians inside to _stop_. We read _Viva la Divina Provvidenza_, in flaming characters on the front board of a carriole, while the whip is goading the poor starved brute who drags it; for these barbarians in the rear of European civilization, plainly are of opinion that a cart with a sacred device shall not _break down_, though its owner commit every species of cruelty.

The next day found us again installed at our old quarters in Palermo, where, during our brief remaining stay, we visit a conchologist, before which event we had no notion that Sicily was so rich in shells. Two sides of a moderately large room are entirely devoted to his collection. Here we saw a piece of wood nearly destroyed by the Teredo navalis, or sailor's bore, who seems more active and industrious here than elsewhere, and seldom allows himself to be taken whole. Out of hundreds of specimens, three or four perfect ones were all that this collector could ever manage to extract, the molluscos wood-destroyer being very soft and fragile. His length is about three inches, his thickness that of a small quill; he lodges in a shell of extreme tenuity, and the secretion which he ejects is, it seems, the agent which destroys the wood, and pushes on bit by bit the winding tunnel. But his doings are nothing to the working of another wafer-shelled bivalve, whose tiny habitations are so thickly imbedded in the body of a nodule of flint as to render its exterior like a sieve, diducit scopulos aceto. What solvent can the chemist prepare in his laboratory comparable to one which, while it dissolves silex, neither harms the insect nor injures its shell. Amongst the fossils we notice cockles as big as ostrich eggs, clam-shells twice the size of the largest of our Sussex coast, and those of oysters which rival soup-plates. We had indeed once before met with them of equal size in the lime-beds at Corneto. Judging by the oysters, there must indeed have been giants in those days. But this collection was chiefly remarkable for its curious fossil remains of animals from Monte Grifone. In this same Monte Grifone, which we went to visit, is one of the largest of the caves of bones of which so many have been discovered--bones of various kinds, some of small, some of very large animals, mixed together pell-mell, and constituting a fossil paste of scarcely any thing besides. None of the geologists, in attempting to explain these deposits, sufficiently enter into the question of the origin of the enormous quantity, and close juxtaposition, of such heterogeneous specimens.

By eight o'clock we are on board the Palermo steamer, which is to convey us hence to Messina. The baked deck, which has been saturated with the sun's heat all day, is now cooling to a more moderate warmth, and soothing would be the scene but for the noise of women and children. Large liquid stars twinkle here and there, like so many moons on a reduced scale, over the sea, and the night is wholly delightful! A bell rings, which diminishes our numbers, and somewhat clears our deck. The boats which carry off the last loiterers are gone, shaking phosphorus from their gills, and leaving a train of it in their tails; and the many-windowed Pharos of the harbour has all its panes lit up, and twinkles after its own fashion. Round the bay an interrupted crescent of flickering light is reflected in the water, strongest in the middle, where the town is thickest, and runs back; and far behind all lights comes the clear outline of the darkly defined mountain rising over the city. Our own

lantern also is up, the authorities have disappeared, Monte Pelegrino begins to change its position, we are in motion, and a mighty light we are making under us, as our leviathan, turning round her head and snuffing the sea, begins to wind out of the harbour. A few minutes more, and the luminous tracery of the receding town becomes more and more indistinct; but the sky is all stars, and the water, save where we break its smoothness, a perfect mirror. Wherever the paddles play, there the sea foams up into yellow light and gerbes of amber-coloured fireballs, caught up by the wheels, and flung off in our track, to float past with incredible rapidity. Men are talking the language of Babel in the cabin; there is amateur singing and a guitar on deck--Orion is on his dolphin--adieu, Palermo!

APPROACH TO MESSINA.

The Italian morning presents a beautiful sight on deck to eyes weary and sore with night, as night passes on board steamers. We pass along a coast obviously of singular conformation, and to a geologist, we suppose, full of interest. We encounter a herd of classical dolphins out a-pleasuring. We ask about a pretty little town perched just above the sea, and called Giocosa. By its side lies Tyndaris--classical enough if we spell it right. The snow on Etna is as good as an inscription, and to be read at any distance; but what a deception! they tell us it is thirty miles off, and it seems to rise immediately from behind a ridge of hills close to the shore. The snow cone rises in the midst of other cones, which would appear equally high but for the difference of colour. Patti is a picturesque little borgo, on the hillside, celebrated in Sicily for its manufacture of hardware. In the bay of Melazzo are taken by far the largest supplies of thunny in the whole Mediterranean. From the embayed town so named you have the choice of a cross-road to Messina, (twenty-four miles;) but who would abridge distance and miss the celebrated straits towards which we are rapidly approaching, or lose one hour on land and miss the novelties of volcanic islands, and the first view of Scylla and Charybdis? It is but eight o'clock, but the awning has been stretched over our heads an hour ago. As to breakfast--the meal which is associated with that particular hour of the four-and-twenty to all well regulated minds and stomachs--it consists here of thin veneers of old mahogany-coloured thunny, varnished with oil, and relieved by an incongruous abomination of capers and olives. The cold fowls are infamous. The wine were a disgrace to the sorriest tapster between this and the Alps, and also fiery, like every thing else in this district. Drink it, and doubt not the old result--de conviva Corybanta videbis. (Oh, for muffins and dry toast!) Never mind, we shall soon be at Messina. And now we approach a point from which the lofty Calabrian coast opposite, and the flinty wall of the formidable Scylla, first present themselves, but still as distant objects. In another half hour we are just

opposite the redoubtable rock; and here we turn abruptly at right angles to our hitherto course, and find ourselves _within_ the straits, from either side of which the English and the French so often tried the effect of cannon upon each other. It is now what it used to be--fishing ground. The Romans got their finest *muræna* from the whirlpools of _Charybdis_. [17] The shark (_cane di mare_) abounding here, would make bathing dangerous were the water smooth; but the rapid whirlpools through which our steam-boat dashes on disdainfully, would, at the same time, make it impossible to any thing but a fish. A passenger assured us he had once seen a man lost in the Vistula, who, from being a great swimmer, trusted imprudently to his strength, and was sucked down by a vortex of far less impetuosity, he thought, than this through which we were moving. From this point till we arrived at Messina, as every body was ripe for bathing, the whole conversation turned naturally on the Messina shark, and his trick of snapping at people's legs carelessly left by the owners dangling over the boat's side. We steam up the straits to our anchorage in about three-fourths of an hour. The approach is fine, very fine. A certain Greek, (count, he called himself,) a great traveller, and we afterwards found not a small adventurer, increases the interest of the approach, by telling us that the hills before us, bubbling up like blisters on chalcedony, have a considerable resemblance, though inferior in character, to those which embellish the Bosphorus and the first view of Constantinople. Inferior, no doubt, in the imposing accessories of mosque and minaret, and of cypresses as big as obelisks, which, rising thickly on the heights, give to the city of Constantinople an altogether peculiar and inimitable charm. Messina is beautifully land-locked. The only possible winds that can affect its port are the north-west and south-east. In summer it is said to enjoy more sea breeze than any other place on the Mediterranean. Our Greek friend, however, says that Constantinople is in this respect not only superior to Messina, but to any other place in the seas of Europe. Pity that the fellows are Turks! We did not find much to interest us within the walls of Messina. There was, to be sure, a fine collection of Sicilian birds, amongst which we were surprised to see several of very exotic shape and plumage. One long-legged fellow, dressed in a dirty white Austrian uniform, with large web-feet, on which he seemed to rest with great complacency, particularly arrested our attention. He stood as high as the _Venus di Medici_, but by no means so gracefully, and thrust his thick carved beak unceremoniously in your face. His card of address was _Phoenicopterus antiquorum_. The ancients ate him, and he looked as if he would break your nose if you disputed with him. A very large finch, which we have seen for sale about the streets here and elsewhere in Sicily, rejoices in the imposing name of _Fringilla cocco thraustis_. He wears his black cravat like a bird of pretension, as he evidently is. The puffin (_Puffinus Anglorum_) also frequents these rocks, though a very long way from the Isle of Wight. No! Messina, though very fine, is not equal to _Palermo_, with its

unrivaled Marina, compared to which Messina is poorly off indeed, in her straggling dirty commerce-doing quay. We went out to see a little garden, which contains half a dozen zere-trees and as many beautiful birds in cages. We are disappointed at the poverty of our dessert in this region of fruitfulness--a few bad oranges, some miserable cherries, and that abomination the green almond. We observe, for the first time, to-day folks eating in the streets the crude contents of a little oval pod, which contains one or two very large peas, twice the size of any others. These are the true cicer, the proper Italian pea. Little bundles of them are tied up for sale at all the fruit stalls, and men are seen all the day long eating these raw peas, and offering them to each other as sugar-plums.

[Footnote 17: "Virroni muræna datur, quo maxima venit Gurgite de Siculo: nam dum se continet Auster, Contemnunt mediam tem eraria lina Charybdim." JUVENAL, Sat. v. 99.]

In the Corso we see a kind of temporary theatre, the deal sides of which are gaudily lined with Catania silk, and on its stage a whole dramatis personæ of sacred puppets. It is lighted by tapers of very taper dimensions, and its stalle are to be let for a humble consideration to the faithful or the curious. It turns out to be a religious spectacle, supported on the voluntary system--but there is something for your money. A vast quantity of light framework, to which fireworks, chiefly of the detonating kind, are attached, are already going off, and folk are watching till it be completed. Then the evening's entertainment will begin, and a miser indeed must he be, or beyond measure resourceless, who refuses halfpence for such choice festivities. Desirous to make out the particular representation, we get over the fence in order to examine the figures of the drama on a nearer view. A smartly dressed saint in a court suit, but whom mitre and crosier determine to be a bishop, kneels to a figure in spangles, a virgin as fond of fine clothes as the Greek Panageia; while on the other side, with one or two priests in his train, is seen a crowd in civil costume. A paper cloud above, surrounded by glories of glass and tinsel, is supported by two solid cherubs equal to the occasion, and presents to the intelligent a representation of--we know not what! Fire-works here divide the public with the drum--to one or other all advertisement in Sicily is committed. A sale of fish and flesh, theatric entertainments, processions, and church invitations, are all by tuck of drum, or by squib and cracker. How did they get on before the invention of gunpowder? If a new coffeehouse is established, a couple of drums start it advantageously, and beat like a recruiting party up and down the street, to the dismay of all Forestieri. The drum tells you when the thunny is at a discount, and fire-works are let off at fish stalls when customers are slack.

An old tower, five miles off, is called the telegraph. People go there for the panorama at the expense of three horses and two hours; but you are repaid by two sea views, either of which had been sufficient. Messina, its harbour, the straits, the opposite coast of Calabria, Scylla, and Rhegium, (famed for its bergamot,) are on the immediate shore, and a most striking chain of hills for the background, which, at a greater distance, have for their background the imposing range of the Abruzzi. The Æolian islands rise out of the sea in the happiest positions for effect. Stromboli on the extreme right detaches his grey wreath of smoke, which seems as if it proceeded out of the water, (for Stromboli is very low,) staining for a moment the clear firmament, which rivals it in depth of colour. Some of the volcanic group are so nearly on a level with the water, that they look like the backs of so many leviathans at a halt. The sea itself lies, a waveless mirror, smooth, shining, slippery, and treacherous as a serpent's back--"miseri quibus intentata nites," say we.

JOURNEY TO TAORMINA.

We left Messina under a sky which no painter would or could attempt; indeed, it would not have looked well on paper, or out of reality. There are certain unusual, yet magnificent appearances in nature, from which the artist conventionally abstains, not so much from the impotence of art, as that the nearer his approach to success the worse the picture. At one time the colours were like shot or clouded silk, or the beautiful uncertainty of the Palamida of these shores, or the matrix of opal; at another, the Pacific Ocean above, of which the continuity is often for whole months entire, was broken into gigantic continents and a Polynesia of rose-coloured islands that no ships might approach; while in this nether world the middle of the Calabro-Sicilian strait was occupied by a condensation of vapour, (one could never profane them by the term of sea-mist or fog;) the most subtle and attenuated which ever came from the realms of cloud-compelling Jove. This fleecy tissue pursued its deliberate progress from coast to coast, like a cortege of cobwebs carrying a deputation from the power-looms of Arachne in Italy to the rival silk-looms at Catania. We pass the dry beds of mountain torrents at every half mile, ugly gashes on a smooth road; and requiring too much caution to leave one's attention to be engaged by many objects altogether new and beautiful. The rich yellow of the Cactus, and the red of the Pomegranate, and the most tender of all vegetable greens, that of the young mulberry, together with a sweet wilderness of unfamiliar plants, are not to be perfectly enjoyed on a fourfooted animal that stumbles, or on a road full of pitfalls. We shall only say that the Cynara cardunculus, (a singularly fine thistle or wild artichoke;) the prickly uncultivated love-apple, (a beautiful variety of the Solanum;) of which the decoction is not

infrequently employed in nephritic complaints; the *Ferula*, sighing for occupation all along the sea-shore, and shaking its scourge as the wind blows; the *Rhododendron*, in full blossom, planted amongst the shingles; the *Thapsia gargarica*, with its silver umbel, looking at a short distance like mica, (an appearance caused by the shining white fringe of the capsule encasing its seed,) and many other strange and beautiful things, were the constant attendants of our march. We counted six or seven varieties of the spurge, (*Euphorbium*) each on its milky stem, and in passing through the villages had *Carnations* as large as *Dahlias* flung at us by sunburnt urchins posted at their several doors. The sandy shore for many miles is beautifully notched in upon by tiny bays like basins, on which boats lie motionless and baking in the sun, or oscillate under a picturesque rock, immersed up to its shoulders in a green *hyaloid*, which reflects their forms from a depth of many fathoms. On more open stretches of the shore, long-drawn ripples of waves of tiny dimension are overrunning and treading on one another's heels for miles a-head, and tapping the anchored boat "with gentle blow." The long-horned oxen already spoken of, toil along the seaside road like the horses on our canal banks, and tug the heavy felucca towards Messina--a service, however, sometimes executed by men harnessed to the towing-cord, who, as they go, offend the Sicilian muses by sounds and by words that have little indeed of the [Greek: *Dôriz aoida*]. The gable ends of cottages often exhibit a very primitive windmill for sawing wood within doors. It is a large wheel, to the spokes of which flappers are adjusted, made of coarse matting, and so placed as to profit by the ordinary sea breeze; and, while the *wind* is thus *sawing* his planks for him, the carpenter, at his door, carries on his craft. We pass below not a few fortresses abutting over the sea, or perched on the mountain tops. Many of these are of English construction, and date from the occupation of the island during the French war: in a word, the whole of this Sicilian road is so variously lovely, that if we did not know the *cornice* between *Nice* and *Genoa*, we should say it was quite unrivaled, being at once in lavish possession of all the grand, and most of the milder elements of landscape composition. It is long since it became no wonder to us that the greatest and in fact the only, real pastoral poet should have been a Sicilian; but it is a marvel indeed, that, having forgotten to bring his *Eclogues* with us, we cannot, through the whole of Sicily, find a copy of Theocritus for sale, though there is a *Sicilian* translation of him to be had at Palermo. As he progresses thus delightfully, a long-wished for moment awaits the traveller approaching towards *Giardini*--turning round a far projecting neck of land, *Etna* is at last before him! A disappointment, however, on the whole is Etna himself, thus introduced. He looks far below his stature, and seems so *near*, that we would have wagered to get upon his shoulders and pull his ears, and return to the little town to dine; the ascent also, to the eye, seems any thing but steep; nor can you easily be brought to believe

that such an expedition is from Giardini a three days' affair, except, indeed, that yonder belt of snow in the midst of this roasting sunshine, has its own interpretation, and cannot be mistaken. Alas! In the midst of all our flowers there was, as there always is, the _amari aliquid_--it was occasioned here by the _flies_. They had tasked our _improved_ capacity for bearing annoyances ever since we first set foot in Sicily; but _here_ they are perfectly incontrollable, stinging and buzzing at us without mercy or truce, not to be driven off for a second, nor persuaded to drown themselves on any consideration. Verily, the honey-pots of Hybla itself seem to please these troublesome insects less than the _flesh_-pots of Egypt.

The next day begins inauspiciously for our ascent to Taormina; but the attendants of the excursion are already making a great noise, without which nothing can be done in either of the two Sicilies. A supply of shabby donkeys are brought and mounted, and, once astride, we begin to ascend, the poor beasts tottering under our weight, and by their constant stumbling affording us little inclination to look about. It takes about three-fourths of an hour of this donkey-riding to reach the old notched wall of the town. Two Taorminian citizens at this moment issue from under its arch, in their way down, and guessing what we are, offer some indifferent coins which do not suit us, but enable us to enter into conversation. We demand and obtain a _cicerone_, of whom we are glad to get rid after three hours' infliction of his stupidity and endurance of his ignorance, without acquiring one idea, Greek, Roman, Norman, or Saracen, out of all his erudition. After going through the whole tour with such a fellow for a Hermes, we come at last upon the far-famed theatre, where we did not want him. Here, however, a very intelligent attendant, supported by the king of Naples on a suitable pension of five baiocchi a-day, takes us out of the hands of the Philistine, and with a plan of the ground to aid us, proceeds to give an intelligible, and, as appears to us, a true explanation of the different parts of the huge construction, in the area of which we stand delighted. He directed our attention to a large arched tunnel, under and at right angles to the pulpita, and we did not want direction to the thirty-six niches placed at equal distances all round the ellipse, and just over the lowest range of the CUNEL. All niches were, no doubt, for statues; but these might also have been, it pleases some to suppose, for the reverberation of applause; and they quote something about _ "Resonantia Vasa" _ from Macrobius, adding, that such niches were once probably lined with brass. Of bolder speculatists, some believe the _kennel_ to have been made with a similar intention. Others hold that it may have been a concealed way for introducing lions and tigers to the arena! Now, what if it were a _drain_ for the waters, which, in bad weather, soon collect to a formidable height in such a situation? Whether for voice, or wild beasts, or drainage, or none of these objects, there it is. As to the first, we cannot help being

sceptical. Did it ever occur to an audience to wish the noise they make _greater_, and contrive expedients for _making it so?_

We are here high up amidst the mountains, where, we are to remember, as the ancients came not to spend, like ourselves, an idle hour, but to consume most of the day, _shelter_ would be wanted. Two large lateral spaces, or as it were, side chambers, have received this destination at the hands of the antiquary, and have been supposed lobbies for foul weather or for shade at noon. We were made to notice by our guide, what we should else have overlooked, how the main passage described above communicates with several smaller ones in its progress, and that a small stair was a subsequent contrivance or afterthought meant to relieve, on emergency, the overcharged large one; its workmanship and style showed it plainly to have been added when the edifice had already become _an antiquity_. This altogether peculiar and most interesting building has also suffered still later interpolations: a Saracenic frieze runs round the wall; so that the hands of three widely different nations have been busy on the mountain theatre, which received its _first audience_ twenty-five centuries ago! The view obtained from this spot has often been celebrated, and deserves to be. Such mountains we had often seen before; such a sky is the usual privilege of Sicily; these indented _bays_, which break so beautifully the line of the coast, had been an object of our daily admiration; the hoary side of the majestic Etna, and Naxos with its castellated isthmus, might be seen from _other_ elevated situations; and the acuminate tops of Mola, with its Saracenic tower, were commanded by neighbouring sites--Taormina _alone_, and for its _own_ sake, was the great and paramount object in our eyes, and possessed us wholly! We had been following _Lyll_ half the day in antediluvian remains; but what are the bones of _Ichthyosauri_ or _Megalotheria_ to this gigantic skeleton of Doric antiquity, round which lie scattered the sepulchres of its ancient audiences, Greek, Roman, and Oriental--tombs which had become already an object of speculation, and been rifled for arms, vases, or gold rings, before Great Britain had made the first steps beyond painted barbarism!

The eruptions of Etna have all been recorded. Thucydides mentions one of them episodically in the Peloponesian war. From the cooled caldron that simmers under all that snow, has proceeded all the lava that the ancients worked into these their city walls. The houses of Taurominium were built of and upon _lava_, which it requires a thousand years to disintegrate. After dinner we walk to Naxos, saluting the statue of the patron of a London parish, _St Pancras_, on our way. He stands on the beach here, and claims, by inscription on his pedestal, to have belonged to the apostolic times, St Peter himself having, he says, appointed him to his bishopric. He is patron of Taormina, where he has possessed himself of a Greek temple; and he also protects the faithful of Giardini. Lucky in his _architects_ has

been St Pancras; for many of our readers are familiar with his very elegant modern church in the New Road, modelled, if we have not forgotten, on the Erechtheum, with its _Pandrosean Vestries_, its upright tiles, and all the subordinate details of Athenian architecture. We _met_ here the subject of many an ancient _bas relief_ done into flesh and blood--a dozen men and boys tripping along the road to the music of a bagpipe, one old _Silenus_ leading the jocund throng, and the whole of them, as the music, such as it was, inspired, leaping about and gesticulating with incredible activity. It was a bacchanalian subject, which we had seen on many a sarcophagus, only that the fellows here were not _quite_ naked, and that we looked in vain for those nascent horns and tails by which the children of Pan and Faunus ought to be identified. We always look out for _natural history_. Walking in a narrow street, we saw a tortoise, awake for the season, come crawling out to peep at the poultry; his hybernation being over, he wants to be social, and the hens in astonishment chuckle round him, and his tortoiseshell highness seems pleased at their kind enquiries, and keeps bobbing his head in and out of his _testudo_ in a very sentimental manner. Women who want his shell for _combs_ do not frequent these parts, and so, unless a cart pass over him as he returns home, he is in clover.

A bird frequents these parts with a blue chest, called _Passer solitarius_; he abounds in the rocky crevices. The notes of one, which was shown to us in a cage, sounded sweetly; but, as he was carnivorous, the weather was too hot for us to think of taking him away. We saw two snakes put into the same box: the one, a viper, presently killed the other, and much the larger of the two. Serpents, then, like men, do _not_ as the _Satirist_ asserts, spare their kind. We are disappointed at not finding any coins, nor any other good _souvenirs_, to bring away with us. The height of Taormina is sufficient to keep it from fever, which is very prevalent at Giardini below. Its bay was once a great place for catching _mullet_ for the Roman market. It seems to have been the _Torbay_ of Sicily. Some fish love their ease, and rejoice not in turbulent waters. The _muræna_, or lamprey, on the contrary, was sought in the very whirlpools of _Charybdis_. The modern Roman, on his own side of Italy, has few turbot, but very good ones are still taken off Ancona, in the Adriatic, where the _spatium admirabile Rhombi_, as the reader will, or ought to recollect, was taken and sent to Domitian at Albano by _Procaccio_ or _Estafetta_. Juvenal complains that the Tyrrhene sea was exhausted by the demand for fish, though there was no _Lent_ in those times. If the Catholic clergy insist that there _was_, we beg to object, that the keepers thereof were probably not in a condition to compete with the _Apiciuses_ of the day, who bought fish for their _bodies'_ , and not for their SOULS' SAKE.

CATANIA.

Tum Catane nimium ardenti vicina Typhæo.

After a pleasant drive of twenty miles, we find ourselves at _Aci-Reale_, where a street, called "Galatea," reminds us unexpectedly of a very classical place called Dean's Yard, where we once had doings with _Acis_, as he figures in Ovid's _Metamorphoses_. We were here in luck, and, having purchased some fine coins of several of the tyrants of Sicily from the apothecary, proceeded on our way to Catania. In half an hour we reach the basaltic Isles of the Cyclops, and the Castle of Acis, whom the peasants hereabouts tell you was their king, when Sicily was under the Saracenic yoke. The river _Lecatia_, now lost, is supposed formerly to have issued hereabouts, in the port of Ulysses. Our next move placed us amidst the silk-slops of Catania. We have hardly been five minutes in the town, when offers abound to conduct us up Ætna, in whom, as so much national wealth, the inhabitants seem to take as much interest as in her useful and productive silk-looms. Standing fearless on the pavement of lava that buried their ancient city, they point up with complacency to its fountains above. The mischievous exploits of Ætna, in past times, are in every mouth, and children learn their Ætnean catechism as soon as they are breeched. Ætna here is all in all. Churches are constructed out of his quarried _viscera_--great men lie in tombs, of which the stones once ran liquid down his flames--snuff is taken out of lava boxes--and devotion carves the crucifix on lava, and numbers its beads on a lava rosary--nay, the apothecary's mortar was sent him down from the great mortar-battery above, and the village _belle_ wears fire-proof bracelets that were once too hot to be meddled with. Go to the museum, and you will call it a museum of Ætnean products. Nodulated, porous, condensed, streaked, spotted, clouded, granulated lava, here assumes the colour, rivals the compactness, sustains the polish, of jasper, of agate, and of marble; indeed it sometimes surpasses, in beautiful veinage, the finest and rarest Marmorean specimens. You would hardly distinguish some of it, worked into jassa or vase, from _rosso antico_ itself. A very old and rusty armoury may, as here, be seen any where; but a row of formidable shark skulls, taken along the coast, and some in the very port of Catania, are rarities on which the _ciceroni_ like to prelect, being furnished with many a story of bathers curtailed by them, and secure a large portion of attention, especially if you were just thinking of a dip. A rather fine collection of bronzes has been made from excavations in the neighbourhood, which, indeed, must always promise to reward research. A figure of Mercury, two and a half feet high, and so exactly similar to that of John of Bologna, that his one seemed an absolute plagiarism, particularly attracted our attention on that account. The great Italian artist, however, had been dead one hundred and fifty years before this bronze was dug up. Next in importance to the bronzes, we esteem the collection of

Sicilian, or Græco-Sicilian vases, though inferior in number and selectness to those of the Vatican, or Museo-Borbonico. There is also some ancient sculpture, and some pretty mosaic. Of this composition is a bathfloor, where a family of Cupids, in the centre of the pavement, welcome you with a *utere feliciter*, (may it do you good.) Round the border, a circle of the personified "*months*" is artistically chained together, each bearing his *Greek* name, for fear of a mistake--names not half so good as Sheridan's translation of the Revolutionary calendar--snowy, flowy, blowy--showery, flowery, bowery--moppy, croppy, poppy--breezy, sneezy, freezy. In Catania, we find no lack of coins, nor of sharp-eyed dealers, who know pretty generally their value throughout Europe; but, in order to be quite sure of the price *current*, ask double what they take from one another, and judge, by your abatement of it, of the state of the market elsewhere. Now mind, sir, when they present you the most impudent forgeries, you are not to get into a passion; but, glancing from the object to the vender, quietly insinuate your want of *absolute* conviction in a "*che vi pare di questa moneta.*" He now looks at it again, and takes a squint at *you*; and supposing you smell a rat, probably replies that certainly he *bought* it for *genuine*; but you *have* suggested a doubt, and the piece really begins, even to *him*, to look suspicious, "*anzi à me.*" You reply coolly, and put it down--"That was just what I was thinking;" and so the affair passes quietly off. And now you *may*, if you happen to be tender-hearted, say something compassionate to the poor innocent who has been *taken in*, and proceed to ask him about another; and when you see any thing you long to pocket, enquire what can he afford to let a *brother collector* (give him a step in rank) have *it* for; and so go on feeling your way, and never "putting your arm so far out that you cannot comfortably draw it back again." He will probably ask you if you know Mr B---- or C----, (English collectors,) with whom he has had dealings, calling them "*stimabili signori*;" and, of course, you have no doubt of it, though you never heard of them before. It is also always conciliative to congratulate him on the possession of such and such rare and "*belle cose*;" and if you thus contrive to get into his good graces, he will deal with you at *fair prices*, and perhaps amuse you with an account of such tricks as he is not ashamed to have practised on *blockheads*, who will buy at any cost if the die is fine. Indeed, it has passed into an aphorism among these *mezzo-galantuomini*, as their countrymen call them, that a fine coin is always worth *what you can get for it.*

We heard the celebrated organ of St Benedict, which has been praising God in tremendous hallelujahs ever since it was put up, and a hundred years have only matured the richness of its tones. Its voice was gushing out as we entered the church, and filling nave and aisle with a diapason of all that was soft and soothing, as if a choir of Guido's angels had broke out in harmony.

A stream of fresh water issues under the old town-wall, and an immense mass of incumbent lava, of at least ninety feet high, impends just above its source, the water struggling through a mass of rock once liquefied by fire, in as limpid a rill as if it came from limestone, and so excellent in quality that no other is used in Catania. Women with buckets were ascending and descending to fetch supplies out of the lava of the dead city below, for the use of the living town above. Moreover, this is the only point in Catania where the accident of a bit of wall arresting for some time the progress of the lava current, has left the level of the old town to be rigidly ascertained.

Here, as at _Aci-Reale_, balconies at windows, for the most part supported by brackets, terminating in human heads, give a rich, though rather a heavy, appearance to the street. Much amber is found and worked at Catania. It has been lately discovered in a fossil state, and in contiguity with fossil wood; but we were quite _electrified_ at the price of certain little scent-bottles, and other articles made of this production. You see it in all its possible varieties of colour, opacity, or transparency. The green opalized kind is the most prized, and four pounds was demanded for a pair of pendants of this colour for earrings. Besides the yellow sort, which is common every where, we see the ruby red, which is very rare: some varieties are freckled, and some of the sort which afforded subjects for Martial, and for more than one of the Greek anthologists, with insects in its matrix. _This_ kind, they say, is found exclusively on the coast of Catania. There are such pieces the size of a hand, but it is generally in much smaller bits. Amber lies under, or is formed _upon_ the sand, and abounds most near the _embouchure_ of a small river in this neighbourhood. Many beautiful shells, fossils, and other objects of natural history, appear in the dealers' trays; and polished knife-handles of Sicilian _agate_ may be had at five dollars a dozen.

Fashions for September

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[Illustration: FIG. 1.--PROMENADE AND HOME COSTUME.]

The warm weather, which generally continues until the middle of this month, makes a change in the materials for dresses quite unnecessary, and we report some slight novelties in mode rather than change in fabrics.

The figure on the left, in the above illustration, exhibits an elegant style of WALKING TOILETTE.--Silk drawn bonnet. The poke is made on a whalebone skeleton. Crown reclining, trimmed with a silk *fanchon*, edged with two *ruchès*, one blue, the other same color as the silk. A similar double *ruchè* runs along the edge of the poke and curtain. This last is very full. On one side are small bunches of forget-me-nots, with a little foliage. The ribbons or edges are worked in festoons. Dress and mantelet of plain silk with band *à disposition* trimmed with fringed ribbon. The scarf-mantelet is low on the neck; it is cut with a point, and the part of the top which folds like a shawl falls over the other, from the front, and behind is continued in a point following the shape of the lower part. The band is clouded with blue and green on nut-color, and is detached from the ground by a narrow white fillet; below there is a plain part which forms a hem, under which are sewed fringed ribbons of the same color as the stuff, the threads being alternately an inch of blue and an inch of green. The fringe of the shawl part is from 6 to 7 inches deep at top, that at bottom from 9 to 10 inches. The body is open, and there is a *chiné*, or clouded band, about an inch from the edge. The skirt has two tucks along each of which runs a clouded band with a hem of about an inch, and a deep fringe. The upper one reaches to within 1-1/2 inch of the band at bottom. Therefore, if the skirt is 44 inches deep, there are 10 of fringe, 8 of interval, 10 more of fringe, and the rest forms the band and the top of the skirt. The collar is composed of three rows of lace turned down, and the front of the habit-shirt is formed of three rows of beautiful lace, having the appearance of a very full triple shirt frill.

The other figure, on the right, shows a beautiful style of HOME TOILETTE.--The hair is arranged in waved bands, short and puffed. A cambric chemisette with small plaits, a raised collar of two frills very finely plaited, and edged with a very narrow *valenciennes*. Sleeves half-large, of cambric, plaited small; and ending in a stitched wrist-band with two plaited trimmings, and narrow *valenciennes*, like the collar. Waistcoat body of white quilting, open in front; the collar, which turns down, is narrow, rounded at the corner, and is continued in a little lapel like a man's waistcoat. The lappets are not sewed on at the waist; they are formed by the hollowing of the seams; the front lappet opens and rounds off on the hip. Behind, it is continued square,

with an opening at each seam. The sleeves have an elbow, and a cuff turned up, with the corners rounded off. There is a small pocket on each of the front lappets. The buttons are coral. All the edges of this garment have a double row of stitches. The skirt is made of Scotch poplin.

[Illustration: FIGS. 2 AND 3.--BONNET AND HEAD-DRESS.]

There is a greater variety in the style of bonnets than in dresses. Among the most elegant are a drawn bonnet of white lace, hair, and straw, mounted on a net foundation, with a small poke formed by bouillons of white gros de Naples, placed cross-wise, and separated from each other, by an extremely narrow straw ornament. These bouillons spread between two spaces of straw lace, half an inch wide, one of which forms the edge of the poke, and the other comes at the bottom of the crown. The curtain is very deep, of the same lace, surmounted by a band of silk. Inside are two small bunches of field-flowers, mixed with blades of grass. Another bonnet is composed of cross-pieces of lisse crape, laid flat in contrary directions, and trimmed with three deep blonds, placed according to fancy. The edge is open-work blond. At the bottom of each cross-piece is a roll of shot silk, intended to give relief. Trimmed on the side with a cabbage rose, or marabouts; the curtain, crape and blond. A novel style of drawn bonnet for mourning, is composed of half ornaments of black and white hair, and half narrow flounces of rose-leaf, small-striped ribbons. Each of them is zebraed with three small pink stripes of equal width; but the ribbons are so matched, that these stripes gradually increase in width, and form a very pleasing diversity. Figure 2 represents a very pretty style. The poke of the bonnet of rice-straw, having at the edge in front one row of about an inch wide, and continued, without being cut, along the bottom of the curtain, which is very large and wholly of rice-straw. The crown forms three divisions. Those of the two sides, arranged in the shape of a ram's horns, are composed of three bouillonnés, separated by narrow rows about a quarter of an inch. These bouillonnés, beginning at top, form on each side a kind of semi-circle. The top of the crown between these two parts is formed of nineteen or twenty flat plaits of silk, separated from each other by a narrow row of rice-straw. On the side of the bonnet is a branch of a rose-tree with buds and leaves, which begins wide at bottom and gets narrower up the poke. Inside, ribbons and flowers.

Figure 3 represents a pretty style of head-dress for a home toilette. The hair is disposed in bandeaux, and tied low behind. The head-dress is composed of tufts of silk ribbons, and bunches of velvet bows. These ribbons are mounted on elastic springs, which hold them well on the head.

[Illustration: FIG 4—CHEMISETTE]

Chemisettes and habit-shirts form a part of almost every costume, and when arranged with taste, are very elegant. They are of almost every variety of pattern, and some of them, trimmed with fine lace, are very costly. Our engraving represents a very neat pattern, and quite simple. It is made of the usual material, and trimmed with two rows of festooned bands with insertions to match.

Scarfs are beginning to be quite fashionable. Owing to long disuse, they possess the charm of novelty. The mantelets have, for some time, been approaching in form the scarf of former days, and this graceful portion of a full dress, will doubtless soon be in general vogue.

Waistcoats, too, are gaining favor, and their style very nearly resembles those worn by gentlemen. In fact, the ladies seem determined to reduce the volume of their dresses. This is manifested abroad by the prevailing taste for close fitting jackets, and at home by the general favor in which the "Bloomers" are held. There are signs of radical changes in costume, which neither sneers, caricatures, or serious opposition, can prevent. Health and good taste demand a reform, and common sense will doubtless second the demand with powerful effect.

The Next Vacation

by Alice Wellington Rollins, from *Lippincott's Magazine Of Popular Literature And Science, Old Series, Vol. 36--New Series, Vol. 10, July 1885*

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If it finds you with fifty dollars and a fortnight at your command, you cannot do better than spend both on the Great Lakes.

You don't care for water? But the Great Lakes are not water. You follow closely the most interesting and wonderful shore, and seven different times stop for several hours at places on the coast.

Or perhaps you do care for water, and would not like hugging the shore? One day, at least, on Lake Huron, you would be out of sight of land; and if you should have a lake storm, you would have all the ocean "fun" you would care for.

Or you were thinking of the Thousand Isles? There are a thousand isles in the northern part of Lake Huron, just before you turn into the little winding river that leads to the "Soo."

Or you had planned to see Lake George this year? You will see a beautiful copy of Lake George as you leave the little town of Hancock and pass from the narrow river into a broad expanse dotted with islands, just before entering the canal that leads to the upper part of Lake Superior.

But you had rather go West, among the mines? What mines can you find, more interesting than the great copper-mines of Calumet and Hecla and Quincy?--the only place in the United States, indeed, where you can see the curious man-engine, with its arrangement of changing-platforms for carrying the miners up and down.

Well, you meant to go "canoeing." Some very choice canoeing and shooting of rapids you can have during the hours at the Sault Ste. Marie, popularly known as the "Soo," and during the two days that the steamer waits at Duluth before the return-trip Lake Superior will prove not an unattractive spot to paddle about in.

Add to this the interest of the magnificent new locks at the "Soo," the historical and romantic associations with Marquette and Mackinac (for you will not forget that Miss Woolson's "Anne" lived on the Great Lakes), and the creature comforts of big state-rooms, with large, comfortable beds, and running water in the basins, on admirable steamers that set an excellent hotel-table, and you will wonder, as we did, that so few tourists seem to know about, or care for, one of the most enjoyable excursions in the country.--I am quite sure I can say the most enjoyable for the little money it costs.

We took it ourselves quite by accident,--willing to go out of our way a little on the journey to Colorado in the heat of summer for the sake of a little trip by water to compensate for the sea-shore cottage we were leaving behind us for the season. We did not, indeed, begin the trip, as the steamers do, at Buffalo; for, although time and tide wait for no man at the East, at the West there are no tides, and time was willing to make an appointment for us to overtake the steamer at Detroit. We were glad of an excuse for lingering at the House Beautiful in Buffalo, where we would rather spend Sunday any time than on any lake in the world. Fortunately, we had "been to the Falls" many times before, and had seen Niagara in winter splendor and summer loveliness: so we were at liberty to idle away the fleeting hours in the shades of Delaware Avenue, on charming piazzas, till the time came when we must start on the flying trip through Canada if we would overtake the steamer Japan.

She was just gliding into her dock at Detroit as we stepped from the cars, and we still had three or four hours' leisure before she would start again in which to drive about the pretty city and call on friends. Just before midnight we embarked, and our first experience of the Great Lakes was a night of peaceful and serene slumber.

Peaceful and serene, too, was the following day,--a patient waiting for the scenery to begin, sitting with novels on what was facetiously known as "the back piazza" of the Japan, out of sight of land, but gliding over a sea so smooth that the hanging flower-baskets on the deck scarcely stirred. If you scorn such tame delights when apparently at sea, remember that it might have been rough as only lakes are rough in a great storm. It was very warm. The captain's assurance that the next morning we should want to borrow his overcoat and mittens had no effect in disguising the fact that it was warm. The ladies dressed for dinner, many of them in white; and the only excitement of the afternoon was the "sighting" of the Michigan, United States man-of-war, cruising in lake-waters. A little knot of officers on deck waved their handkerchiefs; a little knot of pretty girls on the Japan were responding eagerly, when a severe and elderly voice was heard to say, with distinctness, "The officers' wives are on board the Japan. They are waving to _them_."

And in fact, as we glided past, a little child was seen at a port-hole of the Michigan, waving a handkerchief to mamma on the Japan. It had been seriously ill, and the mother, forbidden by the United States government to remain with her sick child on the Michigan, preferred to leave him there with his father, where he could have the care of the special surgeon who understood the case, while she followed as closely as she could in one of the lake-steamers. Ah, how interested we all were! It is recorded in history that certain enemies of the Egyptians used to go into battle with them with each man holding a cat in his arms. Suppose in our next war we try the effect upon our enemies of letting each of our soldiers carry a white-robed baby? One thing is certain, the Michigan captured the Japan with all on board that day simply by exhibiting that little white figure

at its port-hole. The next day at the "Soo" not a murmur of dissent was heard when the good-natured captain, who had no European mails on board, said he would wait an extra hour for the Michigan to come up, that the anxious mother might have twenty-four hours' later news.

On the second morning there was an entire change of weather and landscape. The sun still shone gloriously (the thermometer that day in Chicago stood at 94), but rugs, seal-skins, and hoods were in demand. We were no longer out of sight of land, but were threading our way in and out among a thousand isles, with hills that seemed almost mountains threatening to bar our course before long if we did not turn back the way we came. No one, the captain said, had ever been known to guess the channel correctly; but before long we had made a sharp turn to the left at the only spot that offered an outlet, and found the Great Lakes narrowed suddenly to a beautiful winding river which led us in the course of another hour or two to the "Soo." Here the steamer would wait three hours, and we could explore the queer little town,--quite a popular resort in summer,--or inspect the splendid locks of the great canal, or shoot the rapids. To me it was a genuine pleasure to find at last some rapids that were visible to the naked eye. The famous rapids of the St. Lawrence had been a severe disappointment, but here were rapids worthy of the name. Lake Superior was visibly above us, Lake Huron visibly below, and between ran the turbulent little stream which of course must be flowing into Lake Huron, though we could not have told merely by looking at it which way the current ran.

"Would we go up the rapids?" We had heard of going down the rapids, but in reality the most wonderful part of the performance is going up. Not only is the current fearfully swift, even close to the shore as it is necessary to keep, but the water seems to be only a few inches deep, and the rocks are as thick as plums in a Christmas pudding. Yet two Indians, standing erect, one in the bow and one in the stern of the canoe, pole you up the stream against these terrible odds as easily and surely as a Harvard oarsman might row you across Seneca Lake. Then they pause for a moment.

"How will you have it going down? Rough?" they ask.

"Rough," we answer, wondering what in the world they can mean by speaking as if they were the autocrats of wind and current.

But it seems there are two channels,--one near shore for the timid, and one in mid-stream. We were not to be betrayed into any exhibition of timidity after that first hesitating question, "Do you know the rapids well? How many times have you taken people down?" To which the quiet reply had been, "Three times a day, lady, for twenty years." Twenty thousand times, by rough calculation!

So we went over in mid-stream, and were not sorry,--receiving as we stepped ashore what is probably a part of every programme, the compliment of being "the bravest lady that ever went over the falls."

Many a pleasant day, or week, one might undoubtedly spend at the Sault Ste. Marie, or at Mackinac; but if you have only turned through the straits and gone southward again to Chicago through Lake Michigan, do not think of saying that you have taken the trip on the Great Lakes. To me the Great Lakes will always mean Lake Superior. It is something unique in the geography of the world, and you have the consciousness of your actual height above the level of the sea as you rarely have on any elevated land that is not actually a mountain. Ruskin says that for him the flowers lose their light, the river its music, when he tries to divest any given landscape of its associations with human struggle and endeavor. Our New World scenery, of course, has little of that wonderful charm of association; but there is something singularly impressive in the mere silence and vastness of our great Northern solitudes.

We entered Lake Superior late in the afternoon, and the only event of the evening was a magnificent aurora. Toward midnight the gorgeous tints changed to a thin wedge of perfectly white light, against which in a dusky white the sails of passing vessels were distinctly outlined, though no hulls were visible.

At Marquette, in the morning, a party of Finnish emigrants on board left the ship. Half a dozen Americanized Finns, who had evidently been the inspiring cause of this influx of new citizens, had come to the wharf to greet the new arrivals. They had the same short stature, the same stolid features, as their relatives on board; but there was a difference. The white shirt, the clean collar, the smart straw hat and vivid necktie, with a vigorous step, alert manner, decisive tones, and a certain tendency to help the women with their heavy boxes, distinctly individualized those who had been awhile under American influence.

All day we basked in the sunshine on the captain's bridge. Think of being glad to bask in the sunshine on a 4th of August! Between Marquette and Portage River we passed but one house,--one solitary, lonely house, set on the very edge of the "unsalted sea;" before it a vast expanse of limitless waters, behind it an unbroken, limitless forest; no fields, no crops, no roads, only space enough cleared for the tiny cabin and tinier shed. What had lured people there? What kept them alive? No neighbors, no mail, no farm, no apparent object in life, and only one small rowboat to get away in.

Yet they had put a curtain up at the window! No human being could by any possibility look in at that window. Even the curtain could only be detected with an opera-glass from the steamer that passed twice a week. But the sweet instinct of privacy and home had had its way, and every night the little curtain that never shut out anything but the incurious moonlight or the innocent stars was drawn as regularly as the shades of a Fifth Avenue mansion. Later we learned that it was the Life-Saving Station of Lake Superior.

"No nap this afternoon, ladies," said the captain as he left the luncheon-table. "You must be on the lookout for Portage River."

All the afternoon we watched for the little river, eked out by a canal, that enables us to cut off one hundred and twenty miles of what would be the course around Keweenaw Point, besides giving what is perhaps the most interesting part of the whole trip. So narrow is the opening of the river that no trace of it is to be seen till we are close upon it; yet swift as the dove from far Palmyra flying, unerring as an arrow from the bow, the great ship sweeps across the lake to exactly the right spot. The river is hardly the width of a canal, yet curves as no canal would ever curve, so that the captain in giving orders has to watch both ends of the vessel to see that neither runs aground. It would be impossible for two steamers to pass each other in the river, and the contingency of their meeting is guarded against by the fact that returning steamers have to go round the Point, being too heavily laden with flour from Duluth. As it was, there were but thirteen feet of water in the river, and the Japan drew twelve.

Once in the river, we experienced a most extraordinary transformation. Every one knows what it is to pass in a day or two from northern snow to southern roses, or in a few hours from valley roses to mountain snow; but here, in five minutes, and remaining on precisely the same level, we passed from October to July. The cold lake-breeze died away, and on the little inland river the sun was actually oppressive. Seal-skins were cast aside, and we sent hastily below for sun-umbrellas. The speed of the steamer was slackened to four miles an hour. You heard no click of machinery or swash of water against the sides: we were gliding on through a green and lovely marsh, with water-lilies all about us and wild roses in the distance. Cattle stood knee-deep in pleasant brooks, locusts hummed and buzzed in the warm air, all sweet summer sounds and scents encompassed us. There was even a little settlement of scattered houses; but the expected steamer had evidently created no excitement in the inmates. It would not stop; it brought them neither mail nor summer boarder: why should they care just to see it pass? One man, painting the window-sashes of his house with his back to the steamer, never even turned or paused from his work, though we were so near that he might have heard what was said about him on the deck. It is not the dweller in the wilderness, but the denizen of cities, that longs for something to happen.

At Hancock the steamer waits several hours, giving an opportunity to visit the wonderful copper-mines. We chanced to be there just at the hour to see one of the unique sights of America,--the working of the man-engine that brings the miners up from their work. Even by machinery it takes them half an hour to reach daylight. The mine is worked to the depth of fifteen hundred feet, and for five hundred we could gaze down into the dark and awful shaft, lit for us by the candles burning in the miners' caps. Two long beams, to which are attached at right angles little platforms at intervals of eight feet, each platform holding one man, work up and down.

As each man reaches the level of the platform above on the opposite beam the engine stops just long enough for him to step from one to the other. The long, silent, spectral procession, moving with such shadowy precision and constant motion, with the glimmering lights changing, not fitfully, but with the regularity of well-trained will-o'-the-wisps, made a panorama not easily forgotten. Every minute or two, as the engine paused, the miner whose platform had reached the top sprang suddenly, like a jack-in-the-box, out of the opening into which we were gazing, touched his hat, and disappeared into the town. Long as we waited, the procession was not yet ended when we had to go back to the Japan.

It is just beyond Hancock that the river broadens into the beautiful expanse so like Lake George. As we glided away from the wharf in the light of a splendid sunset, it was curious to look back at the simple little town, so remote from luxury, even from civilization, so humble in its own wants and pleasures, yet pouring such vast sources of supply into the great world of which it knew nothing and asked nothing, save the privilege of enriching it.

At twilight we entered the canal. I have been up the Saguenay, I have been over the Marshall Pass and through the Royal Gorge of the Arkansas, and I have seen many noble scenes in Europe, but no scenery has ever impressed me with such solemnity as the landscape on that canal in the twilight of an August afternoon. Nor was it merely a personal impression. There were two hundred souls on board, with the usual proportion of giddy young girls and talkative youths; the negro waiters as we entered the canal were singing and playing their violins; but in an instant, as the speed of the steamer was again checked to four miles an hour, every sound was hushed on board. During the hour that was occupied in going through the canal, it is a literal fact that not a sound was heard on the great steamer but the low impressive orders of the captain and--if you chanced to be on the captain's bridge--the ticking of the clock in the wheel-house. People spoke in whispers, if they spoke at all, quite unconscious of it till they remembered it afterward. What made it so impressive? I am sure I do not know. Certainly there was nothing awful in the scenery, and we never were in less danger in our lives. We were moving peacefully through a long, narrow sheet of perfectly calm water, stretching straight as a die from the river to the upper lake. If anything had happened, we could have jumped ashore on either side, and another steamer from Buffalo would have come through in a day or two and picked us up. The only thing possible to fear was that we might ground in the shallow water, an emergency from which we could only be relieved, as there are no tides in the lakes, by the tedious process of lightening the cargo. It was a perfectly clear evening after a most beautiful day. But on either side of us, far as the eye could reach, stretched an apparently unbroken forest. Through the narrow vista cleared for our silvery pathway a slow and stately twilight came solemnly to fold us in its embrace, as we advanced solemnly and slowly from vast and awful solitudes to solitudes more vast and awful still. As we drew near the lake again, a little light-house gleamed, and,

as we swept past it out into the broad expanse of limitless waters, the cheerful throb of the machinery quickened again upon the sea, the pleasant swish of the water against the ship greeted us once more, life, movement, and gayety sprang out again on board, and in an instant the entire steamer had burst into laughter and chat and song. We were really in far more danger, from storm or collision or fire, out on the great lake; but the sense of awe had been lifted from us.

We were due at Duluth at four o'clock of the following afternoon. What would she be like, this "zenith city of the unsalted seas," with such a stately avenue of approach? At three o'clock we began to see in the distance what seemed to be her cloud-capped towers and domes and palaces; at half-past three a beautiful little humming-bird, blown from the shore, lit on my scarlet necktie and pecked at this strange flower from the East; at four we were at the wharf.

"I think," said my companion slowly, gazing sorrowfully at the shanties that had made such splendid domes in the distance, "I think I should have called it Delusion, instead of Duluth. It looks like a town in Dickens's 'American Notes' illustrated by Dor?"

Surely never was there a more forlorn little town, trying to scramble up a hillside covered with the tall trunks of dead trees and blackened stumps, shut out from one world by the waste of waters before it, shut in from another by dreary, verdureless hills. Surely nobody lived there; those could not be homes, those desolate frame houses where people were "staying" awhile. It seemed as if the whole town, like "Poor Joe," would soon be told by a vigilant policeman to "move on."

And we, who were looking forward to Colorado, needed no policeman to urge us to "move on" by the earliest train to St. Paul.

The Death of Tragedy

by Kenneth Burke, from *The Little Review*, Autumn 1922, Stella Number
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PART ONE

Argument: From our eagle's nest above the century, we observe details scattered beneath, finally pouncing upon Clarence Turner as a likely bit of carrion.

IN following the road to Lynn, where Paul Revere summoned our forefathers "spiritual at least" to guerilla warfare, note the excellent facilities of the Standard Oil Company for surveying gasoline at exorbitant prices. . .and on the return, fill your pipe with the aid of the tobacco trust, for you can smoke on the after-deck of the railway combine's ferries until the pilot turns and goes the other way, thus making the pipe illegitimate since it is being smoked on the fore-deck. Believe us, it is all built on a healthy basis of Garfield niggers stoning Frogtown dagoes, and Saturday afternoon amateur baseball games in the suburbs, and especially back in them grand days when papa got over his bun just in time for Sunday dinner. (Recalling the game which wound up the season, Brushton against Homewood, and our boys got licked twenty to one oh Jeezuz. In the last half of the ninth, when Humpty Haas came up to the plate, they hit his bat with a lemon. That same evening, however, the pitcher of the other team got drunk and strayed into town somewhat boastfully. And our boys showed that what they couldn't do with baseball they could do with their fists).

My aunt once told me, if I wanted to be healthy, to read "Science and Health" and cat an apple at bedtime, . . but now the country is going to the dogs, and it is all candy laxatives. Great God, if a volcano came upon us suddenly, and preserved our subway signs for future excavations, surely the archeologists would conclude that the rites of visceral purgation had something to do with our religion. In fact, as enlightenment spreads more and more among us, are we not coming to realize with continually increasing clarity that a man can not put in a good day at the office without his once before breakfast and once before going to bed?

Herein lies wisdom: If we have had so many years of the Democrats, let us go Republican; and when we have had so many years of the Republicans, let us spit upon them, turn our backs upon them, and go Democrat; and when we have tired of being

either Democrats or Republicans, let us repeat the process under different appellations. In this way we can always be assured of an abundance of sinecures for our Irish-American population, while we shall seldom make the mistake of electing a mayor without a wad in his cheek... like that perfect product from Pittsburgh who, being introduced among Pittsburgh high society, on preparing to make his speech and noticing that Mrs. Eitelbaum was talking, shouted good-naturedly, "Hay there, you shut up 'r I'll throw y'out." As is evident, he won the election because he knowed how to mix with the boys. A similar situation will be observed in Denver, or Charleston, and other cities.

Our rich and powerful country also possesses certain songs, and we rise when those songs are played, because certain of our countrymen are getting control of the entire meat-packing industry of the Argentine. Millions for defense, but not one cent for tribute; my country, right or wrong, my country; we shall have peace, if we have to fight for it; remember the Maine; by God, we are bound to be great, for we can find the right sentence. (In contra-distinction to the much more accurate Germans who always find the wrong one; as to wit, the scrap of paper.)

There has been kite season, and commy season, and roller-skate season, and baseball season, and swimming season, and roller-skate season, again, and football season . . . and then in the evenings a fire is lighted in an empty lot. There are earnest, unhappy souls who observe these fires from a bedroom window or an automobile, and suddenly feel like going out for a walk in the cold fall air. Forms, half red, half black, disappear and return; there is a gush of sparks. I have at such times heard a horn low out of the darkness, and one voice from the fire answers "Allright," thereupon the circle about the fire being diminished. By ten-thirty no one remains but one orphan, one boy whose father works at night, and one other. The fire is allowed to languish; eventually it burns a sullen, characterless red, left alone in the black field.

Also, there are the nice houses. What has been said for the clean, dead houses on a terrace, with father returning a little after five in the summer, slapping his paper against his knee, and being met on the front steps. There are mists from the river which come after dark to lie over this part of the city. In a slight wind, the arc-lights sway on the deserted corners, making the shadows of telegraph wires climb up and down the walls. Occasionally the Polish maid entertains on the back porch.

The great lump of the country rolls on, with Howard swiping apples out of the cellar, and a highschool sophomore pimpled with pubescent love, and elderly men dressing up to apply for jobs, and unexecuted rapes. . .and thieveries dead in the planning half-ambitions fractional insights while as for Clarence Turner, his book "thank God I" had already reached its eighth edition, and there was the reasonable possibility of his play appearing on Broadway. The success, in fact, had been immediate. Not that Turner was low enough in the scale of jackals to have actually pandered to the public tastes. On the contrary, he had written in all sincerity, and it was simply a lucky accident that those subjects which were nearest to his heart happened to scratch the itch of the muck and glut of America's reading public.

If, climbing upon the ruins of America, we have reached Clarence Turner. . .

PART TWO

Argument: Or rather, having cast about for a theme, we came upon that of Clarence Turner. It is, perhaps, worth further development.

ON the third floor he stopped at a room which was done in purples; Florence was lying down, appropriately. "Ah, then you can come to see me, Clara!" she said to him with a certain commendable richness. He went over to her, and kissed her, and kissed her, and all the memories of her. Glancing at the mantelpiece, he noticed that the lion's head had been restored to its place. (Once, he had gone over to touch it, calling forth from Florence a startled cry, pretty but honest. Another time, when he was looking at it steadily, she walked between them. But Clarence got the thing laid out quite clearly after a while, as is evident from this: While they were taking tea together, he had blurted out quite inconsequently, "It strikes me that the lion's head has a most fatherly look." The next time he came, the head had disappeared; and within a week he had attained her!)

"Yes, I can come, and I dare come, in spite of your loveliness," he answered in tune.

"See what I was reading? Your book... again and again, one chapter! You can not tell me that that chapter was not written to me. . .oh, you know the one!" Not being quite sure of the one, Clarence bowed his head in mute acknowledgement that he knew it, oh, too well. Then a trembling came over him, and he ate her hand with kisses. (But above and beyond the

fact that she had set Rimbaud to music, and had even published songs of her own in which Turner figured indubitably, above and beyond the yield of her kimonos and the genius she had for draping shadows about a room, there was the fact that she slid as gracefully into other arms as into his own. . . which explains after a fashion why he suddenly broke off the affair, marrying some one of a less accomplished quality in her voice. Soon after this, as a divine vengeance, came the success of his novel).

Suddenly she arose, and then, significantly; "But we shall have tea." He looked at her deadly, and let his head sag into his hands. She sang three or four weak little bars of a song of hers, and wrapped her kimono more tightly about her. These little touches had been almost brutally definite; each understood just what had been given and taken. It was, roughly, this: ("But we shall have tea") = ("What, Clarence, you think I can be put down and picked up again at will! I shall break the whole trend of our emotions with the irrelevant tinkling of the tea things.") ... (His sagging head) = ("I accept it, Florence, perhaps after a fashion even welcome it; but I am not too proud to have you see me desolate over the loss. Look, I am frankly miserable; our friendship has meant so much.") . . . (Her timid little flurry of song) = ("Still, you dear, dear boy, it must be that way, if our memories are to be retained in all their purity. Oh God, to see it of a sudden, just what we had, and what we have lost!") . . . And (the wrapping of the kimono) = ("But all that is settled now; snap, it is finished. There is a wall between us"). Silence for a few moments, while they listened to the far echoes of a relationship which was irrevocably gone. (It was all quite sympathetic to his mentality, this thick aura-of-soul which in the course of centuries has come to interpose itself between the agent and the feminal).

The silence continued all during the preparation of the tea. Over against the general formlessness of their emotions came the definite clinking of the China. Clarence's eyes worked earnestly about the designs in the carpet. Then she nodded, and he pulled up his chair. Their feet met beneath the table; she did not withdraw, but looked at him steadily. How far their relationship had retrograded!

She laughed after a time in anticipation of a sentence which she was going to say. "Ha, it almost seems," it had been only the littlest laugh, "it almost seems, Clara, as though you will not really be here until you have left." Then she became agitated. "A history of tea! A history of tea! Is there anything but walls and beds which has seen humanity more intimately? Indeed, I vote for tea, Clarence, for here the great organ-notes of our passions are turned into the neatest, tiniest little cameos.

Think of a murder across the tea-table. What a lovely hokku the whole idea would make!... It should be done, of course, with some sort of poisonous needle, held out along with a very properly turned compliment, and barely scratching the skin. . . . An the final death; would the victim fall across the table? Would the tea-things come rattling to the floor, the destruction of a miniature empire? Really, it is all very lovely, don't you think?" (Both being very conscious that Mrs. Turner could not do this sort of thing at all).

And then: "But let me put away the tea-things. I must put them away now. For I shall not be able to bear it, seeing the room all cluttered up by you. And I must rearrange the chairs." Without ostentation, Clarence took the ends of the cigarettes which he had lined along his saucer "there should be no fetishes!" and carried them to the grate, threw them out of his life, and hers.

It was all so plain that this day was his last hold upon their intimacy. Now he could still go to her and take her in his arms; but after leaving this room this day. . .when he met her on the street, he would touch his hat, ask a few words about her brother, tell her some recent anecdote, and then hurry away.

He resented any distraction as a sin against this woman in front of him. Yet his wife would surely be expecting him from now on. He felt subconsciously that he should offer Florence a pure immersion in the present, in the emphatic this-ness and here-ness of their parting. Their parting, since that was certain. Everything that had happened this afternoon seemed to leave some little broken end. He arose abruptly, went to his hat and coat and threw them across his arm. Walking to the door, he opened it, and paused with one hand on the knob. Florence dripped into her chair, looking at him without meaning.

On her little writing table the phone began ringing. Once, twice, then with a nagging impatience. Tacitly, however, they agreed to rule it out of the scene. Still, it did increase the tempo of their leave-taking; for he began to close the door with a jerk of sudden decision. She leapt from her chair, bolted toward him. He received her with a groan, crushing his hat between them. Then he turned and went stumbling blindly down the stairs, while the phone peeled forth one wild, unbroken plaint.

Reaching home, Turner hurried straight to his room, where for some hours he wrote feverishly.

PART THREE

Argument : Becoming impatient, the author finally wanders elsewhere, and seems in the direction of a positive beauty, when the old subject returns like a gastric juice in the throat.

HE fell asleep in the early morning, and when he awoke again at eight he found that the life had faded out of him. He went down for a walk, bought an orange at an Italian fruit-store on Sullivan Street, and ate it standing on the corner. A drayhorse had fallen in the slush ; Turner watched the agony of its feet as it struggled to rise, while its team-mate looked about with indifference. Finally he surrendered himself. He accepted it more or less consciously that he had given time enough to the burial of his love – taking the term, that is, as a technical expression, by which is meant that love, like potato farming or marine insurance, is developing a specific nomenclature as the manifestations thereof are becoming more standardized with the help of education. Now, if our more prominent novelists, of the type of Turner, could have taken two years of the classics and then two years intensive study in amoristic engineering, this fact could have been put upon its right basis long before now. A graph of the human heart, for instance, by a senior A. E., could have traced the curve from Seeing Her Pass, through Poignant Night and With Her Alone, ending perhaps with Burial of His Love. To look upon this as a scientific terminology, that is, so that the phrase "Burial of his love" should not be dismissed as banal, but rather accepted as the accurate dictionary equivalent for the thing itself, and sanctioned by the consensus of the leading minds of the nation.

The steady rumble of every-day had gradually reclaimed him, so that he turned from the drayhorses " Christ! after Florence could not his wife even be called a drayhorse! Stand up the sorry thing and look at her. He could do that; that was his trade. The brute, walking along these streets; exciting no interest, and yet tearing the last strip of dignity from the woman he had married. Consider all the little pulsing hearts, too good for other pulsing hearts, but not good enough " oh God! how short-coming " for one pulsing heart, our hundred millions are composed of. What sewer-cleaner's daughter would marry the son of a honey-dipper? Yet Clarence Turner. . .after Florence . . .his wife! Added to a sleepless night, it is not hard to understand his bitterness.

When he reached the apartment she had already left, which was a show of delicacy that he had not expected of things. The furniture sat about, peculiarly irresponsible to his emotions. Going to his room, he threw himself upon the bed, and sobbed.

Lying there sobbing, and the stars do go around the earth.
He has read any number of volumes on the play of the mucous
membranes. Let us erect a dirty little monument to these
intellectuals. There is even the possibility that we shall be
driven into the Church by the scurviness of our free-thinkers.
Building upon the sound foundation of this low-visionedness,
there are those who, coming from Ohio, own the loss of an "r",
while others, friend, can pronounce certain words with the ac-
cent on a different syllable than is customary; such observations
are really of value, since they may contribute to the happiness
of still others.

On the other hand, oh God, on the other hand, we shall sail
easily across an enthusiasm of contours. To the south, the
broad back of a hill curved down slowly into the plateau. And
still farther south, an opposing curve swelled up and stretched
away in the haze. While the lake fitted itself silently into the
basin which the glaciers had scooped out for it some thousands
of years ago. Or, off against the sky, consider the little meadow
lying beyond a V of two hills. Or trees banked up the mountain
side like clouds, and at irregular intervals the black-green firs
jutting out like a city of church spires.

While there are, for those who love such things, rains which
come ripping along the valleys, attacking whole forests, bending
around gaps between the mountains, driving things before them.
Further, there are patchy rains; they piddle for a while, then
pour, then even cease entirely, so that the sun gets at the land-
scape here and there in shafts. And there are still other rains
which you go on the porch and exclaim, "Why, it is raining!"
they have sneaked into being so imperceptibly. While after
any sort of rain the woods are even smellier than usual.

Oh, vomit of loveliness! Let us rise in the night and give
thanks for the pure horizons that remain to us. Exult, for the
lieavy hills are patient to be climbed upon; willingly they suffer
us to paw at their necks and sit across the peaks of their ears.
And looking down from them, we see the valley, as it dips and
waves, and how the shadows of the clouds. . . the shadows of the
clouds, there being any number of clouds that day, though there
was also the night when I went to the door and found the whole
world snuggled away under snow/^ that spread off and over the
hills blue in the full moon sifting softly against the fences of
the meadows and drooping from the fir trees.

Addenda

Turner's convalescence was hastened considerably by the intelligence that his play was really to appear on Broadway; he also became wrapped up in the consequences of a note which had said among other things, "Je te desire."

Gallipoli's Shambles

by Compton Mackenzie, et al, from *New York Times Current History; The European War, Vol 2, No. 5, August, 1915, by Various*
PG eBook #22460

Allied Operations Around the Turks' Fortress of Achi Baba

The subjoined narratives, official and semi-official, show clearly the formidable nature of the Allies' land undertaking in the attempt to force the passage of the Dardanelles. It will be noted that Compton Mackenzie, the novelist, has temporarily replaced E. Ashmead-Bartlett as the British press "eyewitness" on the peninsula, and that General Sir Ian Hamilton's reports have for the first time begun to appear. A notable sketch of his career appears in the *Atlantic Monthly* for July by the pen of Alfred G. Gardiner. A poet and a man of romantic ancestry and taste, experienced in commands in India, in Egypt, and in South Africa, General Hamilton was called by the late Lord Roberts the ablest commander in the field. For his qualities of daring and inspiration, as well as for his coolness in directing the complex movements of the battlefield, he was chosen for this most dangerous and bloody of enterprises against the German-officered Turks.[4]

Mr. Mackenzie estimates the losses of the Turks up to June 30 at not less than 70,000. Prime Minister Asquith in the House of Commons, on July 1, announced that the British naval and military losses up to May 31 aggregated 38,635 officers and men. Yet the great fortress of Achi Baba, by that time one of the most powerful in the world, was untaken up to July 20, and the French and British Allies held but a small corner of the area to be conquered.

[Footnote 4: His first report, covering the actions from March 13, when he left London, to May 20, is here omitted because other official reports covering the same period were printed in the June and July numbers of CURRENT HISTORY.]

BATTLE OF THE LONGEST DAY

By Compton Mackenzie

Authorized Press Representative at the Dardanelles.

Dardanelles, via Alexandria,

June 30, 1915.

The battle of the Fourth of June ended with substantial progress on our centre, although on our left and on our right, notwithstanding the most violent charges and counter-charges, we were unable to consolidate some of our initial gains. The reason of this may be found in the natural strongholds of the Turkish flanks, natural strongholds that are helped by the most elaborate fortifications.

The British and French line from the Aegean to the Dardanelles is confronted by rising ground that culminates in the centre with the flat summit of Achi Baba, 800 ft. high. On either side the ground falls away to the sea in ravines and dry watercourses (_deres_), which the Turks have had time to make impregnable to any except those superb troops that are now fighting to pass over them.

There is no room upon the Gallipoli Peninsula to find weak points, and we are now in the position of having to storm an immensely strong fortress, the advanced works of which, by an amazing feat of arms, we already hold, and the glacis of which has to be crossed before we move forward to the assault upon the bastion of Achi Baba and beyond to the final assault upon the very walls of that fortress, the Kilid Bahr Plateau.

Farther up the coast the Australians and New Zealanders have made a lodgment upon one of the strongest advanced works of the Kilid Bahr Plateau. As seen from the northwest here they threaten the communications of the "fortress" and are drawing against them a large part of the garrison. This is composed of the flower of the Turkish Army, and, notwithstanding casualties that must already amount to 70,000, the troops are fighting with gallantry--with desperation, indeed, because they realize that when the bastion of Achi Baba falls the occupation of the Kilid Bahr Plateau becomes a mere question of time, and that when Kilid Bahr falls the doom of Constantinople is at hand. In view of the difficulties--were it not for the landing one would be tempted to say the impossibilities--which confront our men, the gain of a score of yards in the Gallipoli Peninsula may fairly represent for the purposes of comparison a gain of 500 yards in the Western theatre of war. Therefore, to find its importance the gain of 500 yards on June 4 must be measured with affairs like Neuve Chapelle; and the few quiet days that succeeded may be accepted as repose.

[Illustration: Map of Gallipoli Peninsula, showing the mountainous nature of the terrain, and Achi Baba.]

After a violent effort on the night of June 11 to 12 there was a brilliant little action by the Border Regiment and the South Wales Borderers which resulted in the gain of two trenches. On the 16th the enemy, led by a Turkish and a German officer, made an assault on the trenches of the 88th Brigade, but were driven off with loss. However, that night the trenches gained by the two regiments on the 11th were heavily bombed, so heavily that our men were forced to retire about 30 yards and dig themselves in. At dawn we were able to enfilade with machine-guns the vacated trenches.

Then the Dublin Fusiliers charged with the bayonet, and once more gave us possession of our gains at heavy cost to the Turks, whose dead filled one trench.

On the evening of the 18th the enemy bombarded very heavily another portion of our trenches on this side of the line. They were evidently attempting in miniature our own methods of Neuve Chapelle and June 4, as immediately after the bombardment they were seen to be massing for an attack. However, the imitation ended rather abruptly at this point, and the affair petered out.

On the evening of the 19th the Turks by a fierce attack, managed to get into an awkward salient which had remained in our hands after June 4. For some time there was great difficulty in recovering this, but the 5th Royal Scots and a company of the Worcesters, led by Lieut.-Colonel Wilson of the former regiment, made a glorious attack, and drove out the Turks.

Of the Royal Scots, one can add nothing but that they are Edinburgh Territorials brought in by the fortune of war to make the twelfth regiment of the immortal 29th Division whose deeds since April 25 might have stirred the ghost of Homer to sing their valour.

Mention has been made already of the difficulties that oppose our advance upon the two flanks. On June 21 it was determined to straighten the line upon the extreme right, and at 1.30 A.M. the preliminary bombardment began. The dawn had been clear, but soon a curtain of silver, through which gleamed the ghost of the rising sun, hung over the Kereves Dere. This was the smoke of bursting shells. Slowly as the sun climbed up the curtain became more substantial. Then it seemed to droop and sweep along the hollows like a vanishing mist of dawn, and during a respite the thin blue smoke of the bivouac fires came tranquilly up into the still air. The respite was very brief, and the bombardment began again with greater fierceness than before. The 75's drummed unceasingly. The reverberation of the 125's and of the howitzers shook the observation post. Over the Kereves Dere, and beyond, upon the sloping shoulders of Achi Baba, the curtain became a pall. The sun climbed higher and higher. All that first mirage of beauty had disappeared, and there was nothing but the monstrous shapes

of bursting shells, giants of smoke that appeared one after another along the Turkish lines. All through the morning the cannonade went on.

By noon the Second Division of the French had on the left stormed and captured all the Turkish trenches of the first two lines. Even the Haricot Redoubt, with its damnable entanglements and its maze of communicating trenches, was in French hands. On the right, however, the First Division, after reaching their objective, had been counter-attacked so effectively that they had fallen back. Again they advanced; again they took the trenches; again they were driven out. It began to look as if the victory upon the left would be fruitless, that the position would become an untenable salient and the Haricot Redoubt revert to the enemy.

At this moment a message was sent to say that the trenches must be recaptured, and, when recaptured, held. There were still five hours of daylight for this battle of the longest day. British guns and howitzers were asked for and were lent at once. The bombardment was resumed throughout that afternoon, and at half-past five it seemed as if every gun on earth were pouring shells on the Turkish lines.

At six o'clock the third assault was delivered. In one trench there was a temporary shortage of ammunition, but the enemy fought even with stones and sticks and fists. A battalion came hurrying up from the Turkish right to reinforce it, was caught on open ground by the drumming 75's, and it melted away. Six hundred yards of Turkish trenches were taken, and still the bombardment was continued in order to ward off the counter-attack that was anticipated.

The smoke of the shells, which at dawn had been ethereal, almost translucent, was now, in the sunset, turbid and sinister, yet the sunset was very splendid, flaming in crimson streamers over Imbros, tinting the east with rosy reflections and turning the peaks of Asia to sapphires. It had a peculiar significance on this longest day of the year, crowning as it did those precious five hours of daylight that, for the French, had been fraught with such achievement. Slowly the colour faded out, and now, minute by minute, the flashes of the guns became more distinct; the smoke was merged in the gathering dusk, and away over the more distant Turkish lines the bursts of shrapnel came out like stars against the brief twilight. One knew the anxiety there would be in the darkness that now was falling upon this 21st of June, but in the morning we heard gladly that the enemy's counter-attacks had failed, and that our Allies were indeed firmly established.

The Turkish casualties were at least 7,000. One trench, 200 yards long and 10 feet deep, was brimming over with the dead. They were valiant those dead men. French officers who have fought in the West say that,

as a fighting unit, one Turk is worth two Germans; in fact, with his back to the wall, the Turk is magnificent. The French casualties were marvellously few considering what a day it had been, what an enemy was being attacked, and how much had been gained.

The right of the line now commands Kereves Dere, and the profile of Achi Baba seems to write itself less solidly against the sky.

ATTACK BY LAND AND SEA

The British Press Bureau on June 30, 1915, issued the following:

General Sir Ian Hamilton reports that the plan of operations on the 28th was to throw forward the left of his line southeast of Krithia, pivoting on a point about one mile from the sea, and after advancing on the extreme left for about half a mile to establish a new line facing east on ground thus gained. This plan entailed the capture in succession of two lines of the Turkish trenches east of the Saghir Dere, and five lines of trenches west of it. The Australian Corps was ordered to co-operate by making a vigorous demonstration.

The action opened at nine o'clock with a bombardment by heavy artillery. The assistance rendered by the French in this bombardment was most valuable.

At 10.20 the Field Artillery opened fire to cut wire in front of Turkish trenches, and this was effectively done. The effect on the enemy's trench near the sea was great. The very accurate fire of his Majesty's ships Talbot, Scorpion and Wolverine succeeded in keeping down his artillery fire from that quarter.

At 10.45 a small Turkish advanced work in the Saghir Dere known as the Boomerang Redoubt was assaulted. This little fort, which was very strongly sited and protected by extra strong wire entanglements, has long been a source of trouble. After special bombardment by trench mortar, and while bombardment of surrounding trenches was at its height, part of the Border Regiment at the exact moment prescribed leapt from their trenches as one man like a pack of hounds, and pouring out of cover raced across, and took the work most brilliantly.

The artillery bombardment increased in intensity till 11 A.M., when the range was lengthened, and infantry advanced. The infantry attack was carried out with great dash along the whole line.

West of Saghir Dere three lines of trenches were captured with little opposition. The trenches were full of dead Turks, many buried by the bombardment, and one hundred prisoners were taken in them.

East of the Ravine the Royal Scots made a fine attack, capturing the two lines of trenches assigned to their objective, but the remainder of the Brigade on their right met with severe opposition and were unable to get forward.

At 11.30 the Royal Fusiliers led its Brigade in the second phase of the attack west of the Ravine. The Brigade advanced with great steadiness and resolution through the trenches already captured, and on across the open, and taking two more lines of trenches reached the objective allotted to them, the Lancashire Fusiliers inclining half-right and forming line to connect with our new position east of the Ravine.

The northernmost objective had now been attained, but the Gurkhas pressing on under the cliffs captured an important knoll still further forward, actually due west of Krithia. This they fortified and held during the night, making our total gain on the left precisely one thousand yards.

During the afternoon the trenches, a small portion of which remained uncaptured on the right, were attacked, but the enemy held on stubbornly supported by machine-guns and artillery, and the attacks did not succeed.

During the night the enemy counter-attacked the furthest trenches gained, but was repulsed with heavy loss. A party of Turks, who penetrated from the flank between two lines of captured trenches, was subjected to machine-gun fire at daybreak, suffered very heavily, and the survivors surrendered.

Except for a small portion of trench already mentioned, which is still held by the enemy, all and more than was hoped for from operations has been gained. On the extreme left the line has been pushed forward to a specially strong point well beyond the limit of the advance originally contemplated.

All engaged did well, but certainly the chief factor in the success was the splendid attack carried out by the 29th Division, whose conduct on this, as on previous occasions, was beyond praise.

AUSTRALIANS IN ACTION

The British Press Bureau states on July 1 that, in continuation of his last message respecting the British advance in the Gallipoli Peninsula, Sir Ian Hamilton had reported as follows:

Further details have now been received with regard to the part played by the Australian and New Zealand Army Corps in the operations of the

29th. As previously stated, the General Officer Commanding the Australian and New Zealand Army Corps was instructed to undertake operations with a view to preventing the enemy in his front from detaching troops to the southern area.

Between 11.30 A.M. and 12 noon the action was opened, His Majesty's ships Humber, Pincher, and Chelmer engaging enemy's heavy guns. At 1 P.M. part of the Second Light Horse Brigade and the Third Infantry Brigade moved out on the right of the position, advancing some 700 yards, when the enemy was encountered in strength. Meanwhile the artillery engaged the enemy's reserves, which were collecting in the ravine opposite right centre, by shelling them effectively with guns and howitzers.

About 2.30 P.M. the enemy appeared to be preparing a counter-attack against the left of our advanced troops, but on howitzer and machine-gun fire being turned on the enemy's attacks were easily repulsed. The retirement of the advanced troops was begun at 3 P.M., well covered by rifle, machine-gun, and artillery fire, and the troops were all back in the trenches between 4.30 and 5.30 P.M.

Our machine-guns and artillery did considerable execution. Naval gun fire also gave valuable assistance. Demonstrations made after dark at 8.45 and 11.30 P.M. with flares, star shell, and destroyer bombardment were successfully carried out.

The Eighth Corps report 180 prisoners taken since the morning of the 28th, namely, 38 of the Sixteenth Regiment, 139 of the Thirty-third Regiment, and three of the Thirteenth Regiment. A Circassian prisoner carried a wounded private of Royal Scots into our lines under fire.

ATTACKED BY THE TURKS

Sir Ian Hamilton reported, as published by the British Press Bureau on July 6, the following details of the attack made by the Turks on the night of 29th-30th June:

About 2 A.M. searchlights of His Majesty's ship Scorpion discovered half a Turkish battalion advancing near the sea northwest of Krithia. Scorpion opened fire, and few of the enemy got away. Simultaneously the enemy attacked the knoll we captured due west of Krithia, advancing from a nullah in close formation in several lines. The attack came under artillery and enfilade rifle fire, and the enemy lost heavily. The foremost Turks got within forty yards of the parapet, but only a few returned.

The Turks made several heavy bomb attacks during the night, our troops being twice driven back a short distance. Early in the morning we

regained these trenches by bayonet attack, and they have since been strengthened.

At 5.30 A.M. 2,000 Turks, moving from Krithia into the ravine, were scattered by machine-gun fire. The operations reflect great credit on the vigilance and accurate shooting of His Majesty's ship Scorpion. The Turkish losses in the nullah and ravine are estimated at 1,500 to 2,000 dead.

About 10 P.M. on the 30th of June the Turks again attacked with bombs a portion of the most northerly trench captured by us on 28th. An officer of the Gurkhas being wounded, not dangerously as it turned out, the men became infuriated, flung all their bombs at the enemy, and then charging down out of the trench used their kukris for the first time and with excellent effect. About dawn the Turks once more attempted an attack over the open, but nearly the whole of these attacking forces, about half a battalion, were shot down, and a final bomb attack, though commenced, failed utterly.

Further reports from Australia and New Zealand Corps, as to the enemy's attack on 29th-30th on our right flank, state that the action commenced by very heavy fire from midnight till 1.30 A.M., to which our men only replied by a series of cheers. The Turks then launched their attack, and came right on with bayonet and bombs. Those who succeeded in getting into our saps were instantly killed; the remainder were dealt with by bomb and rifle fire from the 7th and 8th Light Horse. By 2 A.M. the enemy broke, and many were killed while withdrawing. The enemy's attack was strongest on his right. They were completely taken aback by a concealed sap constructed well ahead of our main line, and the dead are lying thickly in front of this. Some got into the sap and several across it; all these were wiped out by fire from the main parapet farther back.

Following the defeat of this attack, the enemy attacked at 3 A.M. on our left, and 30 men came over the parapets in front of the right of Quinn's Post. These were duly polished off. Prisoners brought in state that three fresh battalions were employed in the main attack, which was made by the personal order of Enver Pasha, who, as they definitely assert, was present in the trenches on June 29. This is confirmed by the statement of an intelligent Armenian prisoner captured on that date. According to him, stringent orders were recently issued that no further attacks were to be made, because if the Turks remained on the defensive the British would be forced to attack, and would suffer as severely as the Turks had hitherto suffered. But Enver Pasha, when he arrived in the northern section, overrode this instruction, and orders were received by the prisoner's regiment that the Australians were to be driven into the sea.

On July 2, after a heavy bombardment of our advanced positions by high explosives and shrapnel, lasting half an hour, the enemy infantry advanced, but were driven back to the main nullah about a mile to our front by the accurate shooting of His Majesty's ship Scorpion and by our rifle and machine-gun fire. About 7 P.M. the Turkish artillery recommenced their bombardment, under cover of which two battalions emerged from the nullah to the northeast of our most advanced trench and commenced an attack across the open, advancing in two regular lines. At the outset very effective shrapnel fire from the 10th Battery Royal Field Artillery caused great execution among the attackers. Gurkha supports then advanced, and there being insufficient room in trenches took up a position on some excavated earth in rear, whence deadly rifle fire was poured into the advancing lines. Turkish officers could be seen endeavouring to get their men forward, but they would not face the fire and retreated in disorder after suffering heavy casualties.

The ground in front of our trenches in every direction can be seen covered with Turkish dead, and patrols sent out at night report that the valleys and ravine are also full of them. There can be no possible doubt that the enemy's losses have been very heavy. After checking and counter-checking reports from all sources, I put down their total casualties between June 28 and July 2 at 5,150 killed and 15,000 wounded. The number of killed is, therefore, approximately correct, while the wounded is an estimate based partly on the knowledge of the number already reported arrived at Constantinople, and on experience of proportion of wounded to killed in previous engagements. Since June 29 the total amount of Turkish arms and ammunition collected is 516 rifles, 51 bayonets, 200 sets of equipment, 126,400 rounds of ammunition, 100 bombs.

The following is an extract from captured divisional orders: "There is nothing that causes us more sorrow, increases the courage of the enemy, and encourages him to attack more freely, causing us great losses, than the losing of these trenches. Henceforth commanders who surrender these trenches, from whatever side the attack may come, before the last man is killed will be punished in the same way as if they had run away. Especially will the commanders of units told off to guard a certain front be punished if, instead of thinking about their work, supporting their units and giving information to the higher command, they only take action after a regrettable incident has taken place.

"I hope that this will not occur again. I give notice that if it does I shall carry out the punishment. I do not desire to see a blot made on the courage of our men by those who escape from the trenches to avoid the rifle and machine-gun fire of the enemy. Henceforth I shall hold responsible all officers who do not shoot with their revolvers all the privates who try to escape from the trenches on any pretext.

Commander of the 11th Div., Colonel Rifaat."

To the copy from which this extract was taken the following note is appended: "To Commander of the 1st Battalion. The contents will be communicated to the officers, and I promise to carry out the orders till the last drop of our blood has been shed. Sign and return. Signed. Hassan, Commander, 127th Regiment. Then follow signatures company commanders."

HEAVY TURKISH LOSSES

_The British Press Bureau on July 7 issued this report by General Ian Hamilton: _

The night of July 3-4 was quiet in the northern section, but at 4 A.M. the enemy started a heavy bombardment of the trenches. All the guns previously used against us, and some new ones, were in action, but the bombardment died away about 6 A.M. without doing much damage. During the bombardment about twenty 11.2-inch shells were dropped from a Turkish battleship in the strait.

In the southern section the Turks kept up a heavy musketry fire along the whole line during the night and did not leave their trenches. At 4 A.M. their batteries started the most violent bombardment that has yet been experienced. At least 5,000 rounds of artillery ammunition were expended by them.

Meanwhile this shelling of our lines on the peninsula proved the preliminary to a general attack on our front with special efforts at certain points. The principal effort was made at the junction of the Royal Naval Division section with that of the French.

Here, at 7.30 A.M., the Turks drove back our advanced troops and assaulted a portion of the line held by the Royal Naval Division. Some fifty Turks gained a footing in our trench, where, nevertheless, some men of the Royal Naval Division held on to our supports, and the men who had retired counter-attacked immediately and hurled the Turks out of the trench again.

Another attack on the right of the Twenty-ninth Division section, was practically wiped out by rifle and machine-gun fire. On our left the Turks massed in a nullah, to the northeast of our newly-captured trenches, and attempted several attacks. None of these was able to get home owing to the steadiness of our troops and our effective artillery support. The bombardment died down toward 11 A.M., though it was resumed at intervals.

Not only was the result a complete failure, but while our losses were

negligible and no impression was made on our line, the enemy added a large number to his recent very heavy casualties. It seems plain from the disjointed nature of his attack that he is finding it difficult to drive his infantry forward to face our fire.

SLAUGHTER BY CANNON LIGHT

_ In a dispatch by George Renwick to The London Daily Chronicle, dated at Lemnos, July 11, the following description of fighting, followed by heavy Turco-German casualties, appeared: _

The heaviest fighting which has taken place on Gallipoli Peninsula since the allied forces landed there began late on Tuesday and lasted well into Wednesday. It resulted in a swing forward of the southern line of the allied armies for five furlongs and in the infliction of staggering losses on the enemy. Those who were in the battle place the Turco-German casualties at 7,000 killed and from 14,000 to 15,000 wounded. Many prisoners were taken.

The whole army in the southern part of the peninsula was engaged, and the Australians and New Zealanders further north also played a part. The victory marks a definite stage in the initial work of throwing forces around Achi Baba, which may now be described as one of the strongest fortresses in the world.

The Allies had been resting in comparative tranquillity and the Turks had evidently become persuaded the enemy was experiencing a shortage of ammunition. This belief convinced them of the excellent opportunity of driving the invaders into the sea. Late Tuesday night the first signs of the enemy's movement were detected. No time was lost in flashing a warning message to headquarters. The French were soon alert and the artillery at that portion of the line against which the attack was being prepared was quickly and strongly reinforced.

French and British machine guns were rushed to the front until a perfect wall of heavy and light guns was in position. Then there came a short interval of silence and waiting, almost oppressive. Suddenly the stillness was broken by a tremendous burst of shells from the Turkish guns, and for a time shrapnel poured down on the French front. But the men were safely positioned in dugouts and little loss resulted. From the strait loud booming began. The battered Goeben was at work again, and during the bombardment she pounded our right with some forty 11-inch shells. Many did not burst--they were apparently of Turkish manufacture.

This hail of shells lasted just an hour and a half and was the severest bombardment to which our lines have been subjected during the weeks of struggle on the peninsula. No sooner had the heavy fire

ceased than great solid masses of Turks leaped forward to the attack. On they came, the silence unbroken save for their shouts, until they reached a point within sixty or seventy yards of the French position. Then from 200 well placed machine guns a devastating answering fire burst from our Allies' trenches, and the rifles joined in, 20,000 of them. The big guns flared and cast a lurid light over the scene.

The Piano in the United States

by James Parton, from *The Atlantic Monthly*, Volume 20, No. 117, July, 1867
EBook #18914

Twenty-five thousand pianos were made in the United States last year!

This is the estimate of the persons who know most of this branch of manufacture, but it is only an approximation to the truth; for, besides the sixty makers in New York, the thirty in Boston, the twenty in Philadelphia, the fifteen in Baltimore, the ten in Albany, and the less number in Cincinnati, Buffalo, Chicago, St. Louis, and San Francisco, there are small makers in many country towns, and even in villages, who buy the parts of a piano in the nearest city, put them together, and sell the instrument in the neighborhood. The returns of the houses which supply the ivory keys of the piano to all the makers in the country are confirmatory of this estimate; which, we may add, is that of Messrs. Steinway of New York, who have made it a point to collect both the literature and the statistics of the instrument, of which they are among the largest manufacturers in the world.

The makers' prices of pianos now range from two hundred and ninety dollars to one thousand; and the prices to the public, from four hundred and fifty dollars to fifteen hundred. We may conclude, therefore, that the people of the United States during the year 1866 expended fifteen millions of dollars in the purchase of new pianos. It is not true that we export many pianos to foreign countries, as the public are led to suppose from the advertisements of imaginative manufacturers. American citizens--all but the few consummately able kings of business--allow a free play to their imagination in advertising the products of their skill. Canada buys a small number of our pianos; Cuba, a few; Mexico, a few; South America, a few; and now and then one is sent to Europe, or taken thither by a Thalberg or a Gottschalk; but an inflated currency and a war tariff make it impossible for Americans to compete with European makers in anything but excellence. In price, they cannot compete. Every disinterested and competent judge with whom we have conversed on this subject gives it as his deliberate opinion that the best American piano is the best of all pianos, and the one longest capable of resisting the effects of a trying climate; yet we cannot sell them, at present, in any considerable numbers, in any market but our own. Protectionists are requested to note this fact, which is not an isolated fact. America possesses such an astonishing genius for inventing and combining labor-saving machinery, that we could now supply the world with many of its choicest products, in the teeth of native competition, but for the tariff, the taxes, and the inflation, which double the cost of producing. The time may come, however, when we shall sell pianos at Paris, and watches in London, as we already do sewing-machines everywhere.

Twenty-five thousand pianos a year, at a cost of fifteen millions of dollars! Presented in this manner, the figures produce an effect upon the mind, and we wonder that an imperfectly reconstructed country could absorb in a single year, and that year an unprosperous one, so large a number of costly musical instruments. But, upon performing a sum in long division, we discover that these startling figures merely mean, that every working-day in this country one hundred and twelve persons buy a new piano. When we consider, that every hotel, steamboat, and public school above a certain very moderate grade, must have from one to four pianos, and that young ladies' seminaries jingle with them from basement to garret, (one school in New York has thirty Chickering's,) and that almost every couple that sets up housekeeping on a respectable scale considers a piano only less indispensable than a kitchen range, we are rather inclined to wonder at the smallness than at the largeness of the number.

The trade in new pianos, however, is nothing to the countless transactions in old. Here figures are impossible; but probably ten second-hand pianos are sold to one new one. The business of letting pianos is also one of great extent. It is computed by the well-informed, that the number of these instruments now "out," in the city of New York, is three thousand. There is one firm in Boston that usually has a thousand let. As the rent of a piano ranges from six dollars to twelve dollars a month,--cartage both ways paid by the hirer,--it may be inferred that this business, when conducted on a large scale, and with the requisite vigilance, is not unprofitable. In fact, the income of a piano-letting business has approached eighty thousand dollars per annum, of which one third was profit. It has, however, its risks and drawbacks. From June to September, the owner of the instruments must find storage for the greater part of his stock, and must do without most of his monthly returns. Many of those who hire pianos, too, are persons "hanging on the verge" of society, who have little respect for the property of others, and vanish to parts unknown, leaving a damaged piano behind them.

England alone surpasses the United States in the number of pianos annually manufactured. In 1852, the one hundred and eighty English makers produced twenty-three thousand pianos,--fifteen hundred grands, fifteen hundred squares, and twenty thousand uprights. As England has enjoyed fifteen years of prosperity since, it is probable that the annual number now exceeds that of the United States. The English people, however, pay much less money for the thirty thousand pianos which they probably buy every year, than we do for our twenty-five thousand. In London, the retail price of the best Broadwood grand, in plain mahogany case, is one hundred and thirty-five guineas; which is a little more than half the price of the corresponding American instrument. The best London square piano, in plain case, is sixty guineas,--almost exactly half the American price. Two thirds of all the pianos made in England are low-priced uprights,--averaging thirty-five guineas,--which would

not stand in our climate for a year. England, therefore, supplies herself and the British empire with pianos at an annual expenditure of about eight millions of our present dollars. American makers, we may add, have recently taken a hint from their English brethren with regard to the upright instrument. Space is getting to be the dearest of all luxuries in our cities, and it has become highly desirable to have pianos that occupy less of it than the square instrument which we usually see. Successful attempts have been recently made to apply the new methods of construction to the upright piano, with a view to make it as durable as those of the usual forms. Such a brisk demand has sprung up for the improved uprights, that the leading makers are producing them in considerable numbers, and the Messrs. Steinway are erecting a new building for the sole purpose of manufacturing them. The American uprights, however, cannot be cheap. Such is the nature of the American climate, that a piano, to be tolerable, must be excellent; and while parts of the upright cost more than the corresponding parts of the square, no part of it costs less. Six hundred dollars is the price of the upright in plain rosewood case,--fifty dollars more than a plain rosewood square.

Paris pianos are renowned, the world over, and consequently three tenths of all the pianos made in Paris are exported to foreign countries. France, too, owing to the cheapness of labor, can make a better cheap piano than any other country. In 1852, there were ten thousand pianos made in Paris, at an average cost of one thousand francs each; and, we are informed, a very good new upright piano can now be bought in France for one hundred dollars. But in France the average wages of piano-makers are five francs per day; in London, ten shillings; in New York, four dollars and thirty-three cents. The cream of the business, in Paris, is divided among three makers,--Erard, Hertz, and Pleyel,--each of whom has a concert-hall of his own, to give *éclat* to his establishment. We presume Messrs. Steinway added "Steinway Hall" to the attractions of New York from the example of their Paris friends, and soon the metropolis will boast a "Chickering Hall" as well. This is an exceedingly expensive form of advertisement. Steinway Hall cost two hundred thousand dollars, and has not yet paid the cost of warming, cleaning, and lighting it. This, however, is partly owing to the good-nature of the proprietors, who find it hard to exact the rent from a poor artist after a losing concert, and who have a constitutional difficulty about saying *No*, when the use of the hall is asked for a charitable object.

In Germany there are no manufactories of pianos on the scale of England, France, and the United States. A business of five pianos a week excites astonishment in a German state, and it is not uncommon there for one man to construct every part of a piano,--a work of three or four months. Mr. Steinway the elder has frequently done this in his native place, and could now do it. A great number of excellent instruments are made in Germany in the slow, patient, thorough manner of the Germans; but in the

fashionable houses of Berlin and Vienna no German name is so much valued as those of the celebrated makers of Paris. In the London exhibition of 1851, Russian pianos competed for the medals, some of which attracted much attention from the excellence of their construction. Messrs. Chickering assert, that the Russians were the first to employ successfully the device of "overstringing," as it is called, by which the bass strings are stretched over the others.

The piano, then, one hundred and fifty-seven years after its invention, in spite of its great cost, has become the leading musical instrument of Christendom. England produces thirty thousand every year; the United States, twenty-five thousand; France, fifteen thousand; Germany, perhaps ten thousand; and all other countries, ten thousand; making a total of ninety thousand, or four hundred and twenty-two for every working-day. It is computed, that an average piano is the result of one hundred and twenty days' work; and, consequently, there must be at least fifty thousand men employed in the business. And it is only within a few years that the making of these noble instruments has been done on anything like the present scale. Messrs. Broadwood, of London, who have made in all one hundred and twenty-nine thousand pianos, only begin to count at the year 1780; and in the United States there were scarcely fifty pianos a year made fifty years ago.

We need scarcely say that the production of music for the piano has kept pace with the advance of the instrument. Dr. Burney mentions, in his *History of Music* (Vol. IV. p. 664), that when he came to London in 1744, "Handel's Harpsichord Lessons and Organ Concertos, and the two First Books of Scarleth's Lessons, were all the good music for keyed instruments at that time in the nation." We have at this moment before us the catalogue of music sold by one house in Boston, Oliver Ditson & Co. It is a closely printed volume of three hundred and sixty pages, and contains the titles of about thirty-three thousand pieces of music, designed to be performed, wholly or partly, on the piano. By far the greater number are piano music pure and simple. It is not a very rare occurrence for a new piece to have a sale of one hundred thousand copies in the United States. A composer who can produce the kind of music that pleases the greatest number, may derive a revenue from his art ten times greater than Mozart or Beethoven enjoyed in their most prosperous time. There are trifling waltzes and songs upon the list of Messrs. Ditson, which have yielded more profit than Mozart received for "Don Giovanni" and "The Magic Flute" together. We learn from the catalogue just mentioned, that the composers of music have an advantage over the authors of books, in being always able to secure a publisher for their productions. Messrs. Ditson announce that they are ready and willing to publish any piece of music by any composer on the following easy conditions: "Three dollars per page for engraving; two dollars and a half per hundred sheets of paper; and one dollar and a quarter per hundred pages for printing." At the same time they frankly notify ambitious teachers, that "not one piece in ten pays the cost of getting

up, and not one in fifty proves a success."

The piano, though its recent development has been so rapid, is the growth of ages, and we can, for three thousand years or more, dimly and imperfectly trace its growth. The instrument, indeed, has found an historian,--Dr. Rimbault of London,--who has gathered the scattered notices of its progress into a handsome quarto, now accessible in some of our public libraries. It is far from our desire to make a display of cheap erudition; yet perhaps ladies who love their piano may care to spend a minute or two in learning how it came to be the splendid triumph of human ingenuity, the precious addition to the happiness of existence, which they now find it to be. "I have had my share of trouble," we heard a lady say the other day, "but my piano has kept me happy." All ladies who have had the virtue to subdue this noble instrument to their will, can say something similar of the solace and joy they daily derive from it. The Greek legend that the twang of Diana's bow suggested to Apollo the invention of the lyre, was not a mere fancy; for the first stringed instrument of which we have any trace in ancient sculpture differed from an ordinary bow only in having more than one string. A two-stringed bow was, perhaps, the first step towards the grand piano of to-day. Additional strings involved the strengthening of the bow that held them; and, accordingly, we find the Egyptian harps, discovered in the catacombs by Wilkinson, very thick and massive in the lower part of the frame, which terminated sometimes in a large and solid female head. From the two-stringed bow to these huge twelve-stringed Egyptian harps, six feet high and beautifully finished with veneer, inlaid with ivory and mother-of-pearl, no one can say how many centuries elapsed. The catgut strings of the harps of three thousand years ago are still capable of giving a musical sound. The best workmen of the present time, we are assured, could not finish a harp more exquisitely than these are finished; yet they have no mechanism for tightening or loosening the strings, and no strings except such as were furnished by the harmless, necessary cat. The Egyptian harp, with all its splendor of decoration, was a rude and barbaric instrument.

It has not been shown that Greece or Rome added one essential improvement to the stringed instruments which they derived from older nations. The Chickerings, Steinways, Erards, and Broadwoods of our day cannot lay a finger upon any part of a piano, and say that they owe it to the Greeks or to the Romans.

The Cithara of the Middle Ages was a poor thing enough, in the form of a large P, with ten strings in the oval part; but it had _movable pegs_, and could be easily tuned. It was, therefore, a step toward the piano of the French Exposition of 1867.

But the Psaltery was a great stride forward. This instrument was an arrangement of _strings on a box_. Here we have the principle of the sounding-board,--a thing of vital moment to the piano, and one upon

which the utmost care is bestowed by all the great makers. Whoever first thought of stretching strings on a box may also be said to have half invented the guitar and the violin. No single subsequent thought has been so fruitful of consequences as this in the improvement of stringed instruments. The reader, of course, will not confound the psaltery of the Middle Ages with the psaltery of the Hebrews, respecting which nothing is known. The translators of the Old Testament assigned the names with which they were familiar to the musical instruments of the Jews.

About the year 1200 we arrive at the Dulcimer, which was an immense psaltery, with improvements. Upon a harp-shaped box, eighteen to thirty-six feet long, fifty strings were stretched, which the player struck with a stick or a long-handled hammer. This instrument was a signal advance toward the grand piano. It was a piano, without its machinery.

The next thing, obviously, must have been to contrive a method of striking the strings with certainty and evenness; and, accordingly, we find indications of a keyed instrument after the year 1300, called the Clavicytherium, or keyed cithara. The invention of keys permitted the strings to be covered over, and therefore the strings of the clavicytherium were enclosed in a box, instead of being stretched on a box. The first keys were merely long levers with a nub at the end of them, mounted on a pivot, which the player canted up at the strings on the see-saw principle. It has required four hundred years to bring the mechanism of the piano key to its present admirable perfection. The clavicytherium was usually a very small instrument,--an oblong box, three or four feet in length, that could be lifted by a girl of fourteen. The clavichord and manichord, which we read of in Mozart's letters, were only improved and better-made clavicytheria. How affecting the thought, that the divine Mozart had nothing better on which to try the ravishing airs of "The Magic Flute" than a wretched box of brass wires, twanged with pieces of quill! So it is always, and in all branches of art. Shakespeare's plays, Titian's pictures, the great cathedrals, Newton's discoveries, Mozart's and Handel's music, were executed while the implements of art and science were still very rude.

Queen Elizabeth's instrument, the Virginals, was a box of strings, with improved keys, and mounted on four legs. In other words, it was a small and very bad piano. The excellent Pepys, in his account of the great fire of London of 1666, says: "River full of lighters and boats taking in goods, and good goods swimming in the water; and only I observed that hardly one lighter or boat in three that had the goods of a house in it, but there were a pair of virginalls in it." Why "a pair"? For the same reason that induces many persons to say "a pair of stairs," and "a pair of compasses," that is, no reason at all.

It is plain that the virginals, or virgin's clavichord, was very far from holding the rank among musical instruments which the piano now possesses. If any of our readers should ever come upon a thin folio entitled "Musick's Monument," (London, 1676,) we advise him to clutch it, retire from the haunts of men, and abandon himself to the delight of reading the Izaak Walton of music. It is a most quaint and curious treatise upon "the Noble Lute, the best of instruments," with a chapter upon "the generous Viol," by Thomas Mace, "one of the clerks of Trinity College in the University of Cambridge." Master Mace deigns not to mention keyed instruments, probably regarding keys as old sailors regard the lubber's hole,--fit only for greenhorns. The "Noble Lute," of which Thomas Mace discourses, was a large, heavy, pot-bellied guitar with many strings. We learn from this enthusiastic author, that the noble lute had been calumniated by some ignorant persons; and it is in refuting their calumnious imputations that he pours out a torrent of knowledge upon his beloved instrument, and upon the state of music in England in 1675. In reply to the charge, that the noble lute was a very hard instrument to play upon, he gives posterity a piece of history. That the lute was hard once, he confesses, but asserts that "it is now easie, and very familiar."

"The First and Chief Reason that it was Hard in former Times, was, Because they had to their Lutes but Few Strings; viz. to some 10, some 12, and some 14 Strings, which in the beginning of my Time were almost altogether in use; (and is this present Year 1675. Fifty four years since I first began to undertake That Instrument). But soon after, they began to adde more Strings unto Their Lutes, so that we had Lutes of 16, 18, and 20 Strings; which they finding to be so Great a Convenience, stayed not long till they added more, to the Number of 24, where we now rest satisfied; only upon my Theorboes I put 26 Strings, for some Good Reasons I shall be able to give in due Time and Place."

Another aspersion upon the noble lute was, that it was "a Woman's Instrument." Master Mace gallantly observes, that if this were true, he cannot understand why it should suffer any disparagement on that account, "but rather that it should have the more Reputation and Honour."

There are passages in this ancient book which take us back so agreeably to the concert-rooms and parlors of two hundred years ago, and give us such an insight into the musical resources of our forefathers, that we shall venture to copy two or three of them. The following brief discourse upon Pegs is very amusing:--

"And you must know, that from the Badness of the Pegs, arise several Inconveniences; The first I have named, viz. the Loss of Labour. The 2d. is, the Loss of Time; for I have known some so extreme long in Tuning their Lutes and Viols, by reason only of Bad Pegs, that They have wearied out their Auditors before they began to Play. A 3d.

Inconvenience is, that oftentimes, if a High-stretch'd small String happen to slip down, 'tis in great danger to break at the next winding up, especially in wet moist weather, and that It have been long slack. The 4th. is, that when a String hath been slipt back, it will not stand in Tune, under many Amendments; for it is continually in stretching itself, till it come to Its highest stretch. A 5th. is, that in the midst of a Consort, All the Company must leave off, because of some Eminent String slipping. A 6th. is, that sometimes ye shall have such a Rap upon the Knuckles, by a sharp-edg'd Peg, and a stiff strong String, that the very Skin will be taken off. And 7thly. It is oftentimes an occasion of the Thrusting off the Treble-Peg-Nut, and sometime of the Upper Long Head; And I have seen the Neck of an Old Viol, thrust off into two pieces, by reason of the Badness of the Pegs, meerly with the Anger and hasty Choller of Him that has been Tuning. Now I say that These are very Great Inconveniences, and do adde much to the Trouble and Hardness of the Instrument. I shall therefore inform you how ye may Help All These with Ease; viz. Thus. When you perceive any Peg to be troubled with the slippery Disease, assure your self he will never grow better of Himself, without some of Your Care; Therefore take Him out, and examine the Cause."

He gives advice with regard to the preservation of the Lute in the moist English climate:--

"And that you may know how to shelter your Lute, in the worst of Ill weathers (which is moist) you shall do well, ever when you Lay it by in the day-time, to put It into a Bed, that is constantly used, between the Rug and Blanket; but never between the Sheets, because they may be moist with Sweat, &c.

"This is the most absolute and best place to keep It in always, by which doing, you will find many Great Conveniencies, which I shall here set down....

"Therefore, a Bed will secure from all These Inconveniences, and keep your Glew so Hard as Glass, and All safe and sure; only to be excepted, That no Person be so inconsiderate, as to Tumble down upon the Bed, whilst the Lute is There; For I have known several Good Lutes spoil'd with such a Trick."

We may infer from Master Mace his work, that the trivial virginals were gaining in popular estimation upon the nobler instrument which is the theme of his eulogy. He has no patience with those who object to his beloved lute that it is out of fashion. He remarks upon this subject in a truly delicious strain:--

"I cannot understand, how Arts and Sciences should be subject unto any such Phantastical, Giddy, or Inconsiderate Toyish Conceits, as ever to be said to be in Fashion, or out of Fashion. I remember there was a

Fashion, not many years since, for Women in their Apparel to be so Pent up by the Straitness, and Stiffness of their Gown-Shoulder-Sleeves, that They could not so much as Scratch Their Heads, for the Necessary Remove of a Biting Louse; nor Elevate their Arms scarcely to feed themselves Handsomly; nor Carve a Dish of Meat at a Table, but their whole Body must needs Bend towards the Dish. This must needs be concluded by Reason, a most Vnreasonable, and Inconvenient Fashion; and They as Vnreasonably Inconsiderate, who would be so Abus'd, and Bound up. I Confess It was a very Good Fashion, for some such Viragoes, who were us'd to Scratch their Husbands Faces or Eyes, and to pull them down by the Coxcombes. And I am subject to think, It was a meer Rogery in the Combination, or Club-council of the Taylors, to Abuse the Women in That Fashion, in Revenge of some of the Curst Dames their Wives."

Some lute-makers, this author informs us, were so famous in Europe, that he had seen lutes of their making, "pittifull, old, batter'd, crack'd things," that were valued at a hundred pounds sterling each; and he had often seen lutes of three or four pounds' value "far more illustrious and taking to a Common eye." In refuting the "aspersion that one had as good keep a horse (for cost) as a Lute," he declares, that he never in his life "took more than five shillings the quarter to maintain a Lute with strings, only for the first stringing I ever took ten shillings." He says, however: "I do confess Those who will be Prodigal and Extraordinary Curious, may spend as much as may maintain two or three Horses, and Men to ride upon them too, if they please. But 20_s._ per ann. is an Ordinary Charge; and much more they need not spend, to practise very hard."

Keyed instruments, despite the remonstrances of the lutists, continued to advance toward their present supremacy. As often as an important improvement was introduced, the instrument changed its name, just as in our day the melodeon was improved into the harmonium, then into the organ-harmonium, and finally into the cabinet organ. The virginals of 1600 became the spinet of 1700,--so called because the pieces of quill employed in twanging the strings resembled thorns, and _spina_, in Latin, means thorn. Any lady who will take the trouble to mount to the fourth story of the Messrs. Chickering's piano store in the city of New York, may see such a spinet as Mrs. Washington, Mrs. Adams, and Mrs. Hamilton played upon when they were little girls. It is a small, harp-shaped instrument on legs, exceedingly coarse and clumsy in its construction,--the case rough and unpolished, the legs like those of a kitchen table, with wooden castors such as were formerly used in the construction of cheap bedsteads of the "trundle" variety. The keys, however, are much like those now in use, though they are fewer in number, and the ivory is yellow with age. If the reader would know the tone of this ancient instrument, he has but to stretch a brass wire across a box between two nails, and twang them with a short pointed piece of quill. And if the reader would know how much better the year 1867 is than the year 1700, he may first hear this spinet played upon in

Messrs. Chickering's dusty garret, and then descend to one of the floors below, and listen to the round, full, brilliant singing of a Chickering grand, of the present illustrious year. By as much as that grand piano is better than that poor little spinet, by so much is the present time better than the days when Louis XIV. was king. If any intelligent person doubts it, it is either because he does not know that age, or because he does not know this age.

The spinet expanded into the harpsichord, the leading instrument from 1700 to 1800. A harpsichord was nothing but a very large and powerful spinet. Some of them had two strings for each note; some had three; some had three kinds of strings,--catgut, brass, and steel; and some were painted and decorated in the most gorgeous style. Frederick the Great had one made for him in London, with silver hinges, silver pedals, inlaid case, and tortoise-shell front, at a cost of two hundred guineas. Every part of the construction of the spinet was improved, and many new minor devices were added; but the harpsichord, in its best estate, was nothing but a spinet, because its strings were always twanged by a piece of quill. How astonished would an audience be to hear a harpsichord of 1750, and to be informed that such an instrument Handel felt himself fortunate to possess!

Next, the piano,--invented at Florence in 1710, by Bartolommeo Cristofali.

The essential difference between a harpsichord and a piano is described by the first name given to the piano, which was hammer-harpsichord, i. e. a harpsichord the strings of which were struck by hammers, not twanged by quills. The next name given to it was forte-piano, which signified soft, with power; and this name became piano-forte, which it still retains. One hundred years were required to prove to the musical public the value of an invention without which no further development of stringed instruments had been possible. No improvement in the mere mechanism of the harpsichord could ever have overcome the trivial effect of the twanging of the strings by pieces of quill; but the moment the hammer principle was introduced, nothing was wanting but improved mechanism to make it universal. It required, however, a century to produce the improvements sufficient to give the piano equal standing with the harpsichord. The first pianos gave forth a dull and feeble sound to ears accustomed to the clear and harp-like notes of the fashionable instrument.

In that same upper room of the Messrs. Chickering, near the spinet just mentioned, there is an instrument, made perhaps about the year 1800, which explains why the piano was so slow in making its way. It resembles in form and size a grand piano of the present time, though of coarsest finish and most primitive construction, with thin, square, kitchen-table legs, and wooden knobs for castors. This interesting instrument has two rows of keys, and is both a harpsichord and a piano,--one set of keys

twanging the wires, and the other set striking them. The effect of the piano notes is so faint and dull, that we cannot wonder at the general preference for the harpsichord for so many years. It appears to have been a common thing in the last century to combine two or more instruments in one. Dr. Charles Burney, writing in 1770, mentions "a very curious keyed instrument" made under the direction of Frederick II. of Prussia. "It is in shape like a large clavichord, has several changes of stops, and is occasionally a harp, a harpsichord, a lute, or piano-forte; but the most curious property of this instrument is, that, by drawing out the keys, the hammers are transferred to different strings. By which means a composition may be transposed half a note, a whole note, or a flat third lower at pleasure, without the embarrassment of different notes or clefs, real or imaginary."

The same sprightly author tells us of "a fine Rucker harpsichord, which he has had painted inside and out with as much delicacy as the finest coach, or even snuff-box, I ever saw at Paris. On the outside is the birth of Venus; and on the inside of the cover, the story of Rameau's most famous opera, Castor and Pollux. Earth, Hell, and Elysium are there represented; in Elysium, sitting on a bank, with a lyre in his hand, is that celebrated composer himself."

This gay instrument was at Paris. In Italy, the native home of music, the keyed instruments, in 1770, Dr. Burney says, were exceedingly inferior to those of the North of Europe. "Throughout Italy, they have generally little octave spinets to accompany singing in private houses, sometimes in a triangular form, but more frequently in the shape of an old virginal; of which the keys are so noisy and the tone is so feeble, that more wood is heard than wire. I found three English harpsichords in the three principal cities of Italy, which are regarded by the Italians as so many phenomena."

To this day Italy depends upon foreign countries for her best musical instruments. Italy can as little make a grand piano as America can compose a grand opera.

The history of the piano from 1710 to 1867 is nothing but a history of the improved mechanism of the instrument. The moment the idea was conceived of striking the strings with hammers, unlimited improvement was possible; and though the piano of to-day is covered all over with ingenious devices, the great, essential improvements are few in number. The hammer, for example, may contain one hundred ingenuities, but they are all included in the device of covering the first wooden hammers with cloth; and the master-thought of making the whole frame of the piano of iron suggested the line of improvement which secures the supremacy of the piano over all other stringed instruments forever.

Sebastian Erard, the son of a Strasbourg upholsterer, went to Paris, a poor orphan of sixteen, in the year 1768, and, finding employment in the

establishment of a harpsichord-maker, rose rapidly to the foremanship of the shop, and was soon in business for himself as a maker of harpsichords, harps, and pianos. To him, perhaps, more than to any other individual, the fine interior mechanism of the piano is indebted; and the house founded by Sebastian Erard still produces the pianos which enjoy the most extensive reputation in the Old World. He may be said to have created the "action" of the piano, though his devices have been subsequently improved upon by others. He found the piano in 1768 feeble and unknown; he left it, at his death in 1831, the most powerful, pleasing, and popular stringed instrument in existence; and, besides gaining a colossal fortune for himself, he bequeathed to his nephew, Pierre Erard, the most celebrated manufactory of pianos in the world. Next to Erard ranks John Broadwood, a Scotchman, who came to London about the time of Erard's arrival in Paris, and, like him, procured employment with a harpsichord-maker, the most noted one in England. John Broadwood was a "good apprentice," married his master's daughter, inherited his business, and carried it on with such success, that, to-day, the house of Broadwood and Sons is the first of its line in England. John Broadwood was chiefly meritorious for a general improvement in the construction of the instrument. If he did not originate many important devices, he was eager to adopt those of others, and he made the whole instrument with British thoroughness. The strings, the action, the case, the pedals, and all the numberless details of mechanism received his thoughtful attention, and show to the present time traces of his honest and intelligent mind. It was in this John Broadwood's factory that a poor German boy named John Jacob Astor earned the few pounds that paid his passage to America, and bought the seven flutes which were the foundation of the great Astor estate. For several years, the sale of the Broadwood pianos in New York was an important part of Mr. Astor's business. He used to sell his furs in London, and invest part of the proceeds in pianos, for exportation to New York.

America began early to try her hand at improving the instrument. Mr. Jefferson, in the year 1800, in one of his letters to his daughter Martha, speaks of "a very ingenious, modest, and poor young man" in Philadelphia, who "has invented one of the prettiest improvements in the forte-piano I have ever seen." Mr. Jefferson, who was himself a player upon the violin, and had some little skill upon the harpsichord, adds, "It has tempted me to engage one for Monticello." This instrument was an upright piano, and we have found no mention of an upright of an earlier date. "His strings," says Mr. Jefferson, "are perpendicular, and he contrives within that height" (not given in the published extract) "to give his strings the same length as in the grand forte-piano, and fixes his three unisons to the same screw, which screw is in the direction of the strings, and therefore never yields. It scarcely gets out of tune at all, and then, for the most part, the three unisons are tuned at once." This is an interesting passage; for, although the "forte-pianos" of this modest young man have left no trace upon the history of the instrument, it shows that America had no sooner cast an

eye upon its mechanism than she set to work improving it. Can it be that the upright piano was an American invention? It may be. The Messrs. Broadwood, in the little book which lay upon their pianos in the Exhibition of 1851, say that the first vertical or cabinet pianos were constructed by William Southwell, of their house, in 1804, four years after the date of Mr. Jefferson's letter.

After 1800 there were a few pianos made every year in the United States, but none that could compare with the best Erards and Broadwoods, until the Chickering era, which began in 1823.

The two Americans to whom music is most indebted in the United States are Jonas Chickering, piano-maker, born in New Hampshire in 1798, and Lowell Mason, singing teacher and composer of church tunes, born in Massachusetts in 1792. While Lowell Mason was creating the taste for music, Jonas Chickering was improving the instrument by which musical taste is chiefly gratified; and both being established in Boston, each of them was instrumental in advancing the fortunes of the other. Mr. Mason recommended the Chickering piano to his multitudinous classes and choirs, and thus powerfully aided to give that extent to Mr. Chickering's business which is necessary to the production of the best work. Both of them began their musical career, we may say, in childhood; for Jonas Chickering was only a cabinet-maker's apprentice when he astonished his native village by putting in excellent playing order a battered old piano, long before laid aside; and Lowell Mason, at sixteen, was already leading a large church choir, and drilling a brass band. The undertaking of this brass band by a boy was an amusing instance of Yankee audacity; for when the youth presented himself to the newly formed band to give them their first lesson, he found so many instruments in their hands which he had never seen nor heard of, that he could not proceed. "Gentlemen," said he, "I see that a good many of your instruments are out of order, and most of them need a little oil, or something of the kind. Our best plan will be to adjourn for a week. Leave all your instruments with me, and I will have them in perfect condition by the time we meet again." Before the band again came together, the young teacher, by working night and day, had gained a sufficient insight into the nature of the instruments to instruct those who knew nothing of them.

Jonas Chickering was essentially a mechanic,--a most skilful, patient, thoughtful, faithful mechanic,--and it was his excellence as a mechanic which enabled him to rear an establishment which, beginning with one or two pianos a month, was producing, at the death of the founder, in 1853, fifteen hundred pianos a year. It was he who introduced into the piano the full iron frame. It was he who first made American pianos that were equal to the best imported ones. He is universally recognized as the true founder of the manufacture of the piano in the United States. No man has, perhaps, so nobly illustrated the character of the American mechanic, or more honored the name of American citizen. He was the soul

of benevolence, truth, and honor. When we have recovered a little more from the infatuation which invests "public men" with supreme importance, we shall better know how to value those heroes of the apron, who, by a life of conscientious toil, place a new source of happiness, or of force, within the reach of their fellow-citizens.

Henry Steinway, the founder of the great house of Steinway and Sons, has had a career not unlike that of Mr. Chickering. He also, in his native Brunswick, amused his boyhood by repairing old instruments of music, and making new ones. He made a cithara and a guitar for himself with only such tools as a boy can command. He also was apprenticed to a cabinet-maker, and was drawn away, by natural bias, from the business he had learned, to the making of organs and pianos. For many years he was a German piano-maker, producing, in the slow, German manner, two or three excellent instruments a month; striving ever after higher excellence, and growing more and more dissatisfied with the limited sphere in which the inhabitant of a small German state necessarily works. In 1849, being then past fifty years of age, and the father of four intelligent and gifted sons, he looked to America for a wider range and a more promising home for his boys. With German prudence, he sent one of them to New York to see what prospect there might be there for another maker of pianos. Charles Steinway came, saw, approved, returned, reported; and in 1850 all the family reached New York, except the eldest son, Theodore, who succeeded to his father's business in Brunswick. Henry Steinway again showed himself wise in not immediately going into business. Depositing the capital he had brought with him in a safe place, he donned once more the journeyman's apron, and worked for three years in a New York piano factory to learn the ways of the trade in America; and his sons obtained similar employment,--one of them, fortunately, becoming a tuner, which brought him into relations with many music-teachers. During these three years, their knowledge and their capital increased every day, for they lived as wise men in such circumstances do live who mean to control their destiny. In plain English, they kept their eyes open, and lived on half their income. In 1853, in a small back shop in Varick Street, with infinite pains, they made their first piano, and a number of teachers and amateurs were invited to listen to it. It was warmly approved and speedily sold. Ten men were employed, who produced for the next two years one piano a week. In 1855, the Messrs. Steinway, still unknown to the public, placed one of their best instruments in the New York Crystal Palace Exhibition. A member of the musical jury has recorded the scene which occurred when the jury came to this unknown competitor:--

"They were pursuing their rounds, and performing their duties with an ease and facility that promised a speedy termination to their labors, when suddenly they came upon an instrument that, from its external appearance,--solidly rich, yet free from the frippery that was then rather in fashion,--attracted their attention. One of the company opened the case, and carelessly struck a few chords. The others were doing the same with its neighbors, but somehow they ceased to chatter when the

other instrument began to speak. One by one the jurors gathered round the strange polyphonist, and, without a word being spoken, every one knew that it was the best piano-forte in the Exhibition. The jurors were true to their duties. It is possible that some of them had predilections in favor of other makers; it is certain that one of them had,--the writer of the present notice. But when the time for the award came, there was no argument, no discussion, no bare presentment of minor claims; nothing, in fact, but a hearty indorsement of the singular merits of the strange instrument."

From that time the Steinways made rapid progress. The tide of California gold was flowing in, and every day some one was getting rich enough to treat his family to a new piano. It was the Messrs. Steinway who chiefly supplied the new demand, without lessening by one instrument a month the business of older houses. Various improvements in the framing and mechanism of the piano have been invented and introduced by them; and, while some members of the family have superintended the manufacture, others have conducted the not less difficult business of selling. To this hour, the father of the family, in the dress of a workman, attends daily at the factory, as vigilant and active as ever, though now past seventy; and his surviving sons are as laboriously engaged in assisting him as they were in the infancy of the establishment.

Besides the Chickering and the Steinways, there are twenty manufacturers in the United States whose production exceeds one hundred pianos per annum. Messrs. Knabe & Co. of Baltimore, who supply large portions of the South and West, sold about a thousand pianos in the year 1866; W. P. Emerson of Boston, 935; Messrs. Haines Brothers of New York, 830; Messrs. Hallett and Davis of Boston, 462; Ernest Gabler of New York, 312; Messrs. E. C. Lighte & Co. of New York, 286; Messrs. Hazelton and Brothers of New York, 269; Albert Webber of New York, 266; Messrs. Decker Brothers of New York, 256; Messrs. George Steck and Co. of New York, 244; W. I. Bradbury of New York, 244; Messrs. Lindeman and Sons of New York, 223; the New York Piano-forte Company, 139. About one half of all the pianos made in the United States are made in the city of New York.

To visit one of our large manufactories of pianos is a lesson in the noble art of taking pains. Genius itself, says Carlyle, means, first of all, "a transcendent capacity for taking trouble." Everywhere in these vast and interesting establishments we find what we may call the perfection of painstaking.

The construction of an American piano is a continual act of defensive warfare against the future inroads of our climate,--a climate which is polar for a few days in January, tropical for a week or two in July, Nova-Scotian now and then in November, and at all times most trying to the finer woods, leathers, and fabrics. To make a piano is now not so

difficult; but to make one that will stand in America,--that is very difficult. In the rear of the Messrs. Steinway's factory there is a yard for seasoning timber, which usually contains an amount of material equal to two hundred and fifty thousand ordinary boards, an inch thick and twelve feet long; and there it remains from four months to five years, according to its nature and magnitude. Most of the timber used in an American piano requires two years' seasoning at least. From this yard it is transferred to the steam-drying house, where it remains subjected to a high temperature for three months. The wood has then lost nearly all the warp there ever was in it, and the temperature may change fifty degrees in twelve hours (as it does sometimes in New York) without seriously affecting a fibre. Besides this, the timber is sawed in such a manner as to neutralize, in some degree, its tendency to warp, or, rather, so as to make it warp the right way. The reader would be surprised to hear the great makers converse on this subject of the warping of timber. They have studied the laws which govern warping; they know why wood warps, how each variety warps, how long a time each kind continues to warp, and how to fit one warp against another, so as to neutralize both. If two or more pieces of wood are to be glued together, it is never done at random; but they are so adjusted that one will tend to warp one way, and another another. Even the thin veneers upon the case act as a restraining force upon the baser wood which they cover, and in some parts of the instrument the veneer is double for the purpose of keeping both in order. An astonishing amount of thought and experiment has been expended upon this matter of warping,--so much, that now not a piece of wood is employed in a piano, the grain of which does not run in the precise direction which experience has shown to be the best.

The forests of the whole earth have been searched for woods adapted to the different parts of the instrument. Dr. Rimbault, in his learned "History of the Piano-forte," published recently in London, gives a catalogue of the various woods, metals, skins, and fabrics used in the construction of a piano, which forcibly illustrates the delicacy of the modern instrument and the infinite care taken in its manufacture. We copy the list, though some of the materials differ from those used by American manufacturers.

MATERIALS. WHERE USED.

Woods. _From_

Oak Riga Framing, various parts.

Deal Norway Wood-bracing, &c.

Fir Switzerland Sounding-board.

Pine America Parts of framing, key-bed
or bottom.

Mahogany Honduras Solid wood of top, and various
parts of the framing
and the action.

Beech England Wrest-plank, bridge or
sound-board, centre of
legs.

Beef-wood Brazils Tongues in the beam,
forming the divisions
between the hammers.

Birch Canada Belly-rail, a part of the
framing.

Cedar S. America Round shanks of hammers.

Lime-tree England Keys.

Pear-tree ---- Heads of dampers.

Sycamore ---- Hoppers or levers, veneers
on wrest-plank.

Ebony Ceylon Black keys.

Spanish		\	
Mahogany	Cuba	\	
Rosewood	Rio Janeiro		
Satinwood	East Indies	--	For decoration.
White Holly	England		
Zebra-wood	Brazils		
Other fancy		/	
woods		/	

Woollen Fabrics.

Baize; green, blue,
and brown Upper surface of key-frame,
 cushions for hammers to fall
 on, to damp dead part of
 strings, &c.

Cloth, various qualities For various parts of the action
 and in other places, to prevent
 jarring; also for dampers.

Felt External covering for hammers.

Leather.

Buffalo Under-covering of hammers-bass.
Saddle " " tenor and treble.
Basil \
Calf |
Doeskin |-- Various parts of action.
Seal |
Sheepskin |
Morocco /
Sole Rings for pedal wires.

Metal.

Iron \
Steel |-- Metallic bracing, and in various small
 screws, springs, centres, pins, &c.,
Brass | &c., throughout the instrument.
Gun metal /
Steel wire Strings.
Steel spun wire Lapped strings.
Covered copper wire " " lowest notes.

Various.

Ivory White keys.

Black lead To smooth the rubbing surfaces of cloth
 or leather in the action.

Glue (of a particular quality \
made expressly for |-- Woodwork throughout.
this trade. /

Beeswax, emery paper,	\
glass paper, French polish,	-- Cleaning and finishing.
oil, putty powder,	
spirits of wine, &c., &c.	/

Such are the materials used. The processes to which they are subjected are far more numerous. So numerous are they and so complicated, that the Steinways, who employ five hundred and twelve men, and labor-saving machinery which does the work of five hundred men more, aided by three steam-engines of a hundred and twenty-five, fifty, and twenty-five horse-power, can only produce from forty-five to fifty-five pianos a week. The average number is about fifty,--six grand, four upright, and forty square. The reader has seen, doubtless, a piano with the top taken off; but perhaps it has never occurred to him what a tremendous pull those fifty to sixty strings are keeping up, day and night, from one year's end to another. The shortest and thinnest string of all pulls two hundred and sixty-two pounds,--about as much as we should care to lift; and the entire pull of the strings of a grand piano is sixty pounds less than twenty tons,--a load for twenty cart-horses. The fundamental difficulty in the construction of a piano has always been to support this continuous strain. When we look into a piano we see the "iron frame" so much vaunted in the advertisements, and so splendid with bronze and gilding; but it is not this thin plate of cast-iron that resists the strain of twenty tons. If the wires were to pull upon the iron for one second, it would fly into atoms. The iron plate is screwed to what is called the "bottom" of the piano, which is a mass of timber four inches thick, composed of three layers of plank glued together, and so arranged that the pull of the wires shall be in a line with the grain of the wood. The iron plate itself is subjected to a long course of treatment. The rough casting is brought from the foundery, placed under the drilling-machine, which bores many scores of holes of various sizes with marvellous rapidity. Then it is smoothed and finished with the file; next, it is japanned; after which it is baked in an oven for forty-eight hours. It is then ready for the bronzer and gilder, who covers the greater part of the surface with a light-yellow bronzing, and brightens it here and there with gilding. All this long process is necessary in order to make the plate retain its brilliancy of color.

Upon this solid foundation of timber and iron the delicate instrument is built, and it is enclosed in a case constructed with still greater care. To make so large a box, and one so thin, as the case of a piano stand our summer heats and our furnace heats (still more trying), is a work of extreme difficulty. The seasoned boards are covered with a double veneer, designed to counteract all the tendencies to warp; and the surface is most laboriously polished. It takes three months to varnish and polish the case of a piano. In such a factory as the Steinways' or the Chickering's, there will be always six or seven hundred cases undergoing this expensive process. When the surface of the wood has been

made as smooth as sand-paper can make it, the first coat of varnish is applied, and this requires eight days to harden. Then all the varnish is scraped off, except that which has sunk into the pores of the wood. The second coat is then put on; which, after eight days' drying, is also scraped away, until the surface of the veneer is laid bare again. After this four or five coats of varnish are added, at intervals of eight days, and, finally, the last polish is produced by the hand of the workman. The object of all this is not merely to produce a splendid and enduring gloss, but to make the case stand for a hundred years in a room which is heated by a furnace to seventy degrees by day, and in which water will freeze at night. During the war, when good varnish cost as much as the best champagne, the varnish bills of the leading makers were formidable indeed.

The labor, however, is the chief item of expense. The average wages of the five hundred and twelve men employed by the Messrs. Steinway is twenty-six dollars a week. This force, aided by one hundred and two labor-saving machines, driven by steam-power equivalent to two hundred horses, produces a piano in one hour and fifteen minutes. A man with the ordinary tools can make a piano in about four months, but it could not possibly be as good a one as those produced in the large establishments. Nor, indeed, is such a feat ever attempted in the United States. The small makers, who manufacture from one to five instruments a week, generally, as already mentioned, buy the different parts from persons who make only parts. It is a business to make the hammers of a piano; it is another business to make the "action"; another, to make the keys; another, the legs; another, the cases; another, the pedals. The manufacture of the hardware used in a piano is a very important branch, and it is a separate business to sell it. The London Directory enumerates forty-two different trades and businesses related to the piano, and we presume there are not fewer in New York. Consequently, any man who knows enough of a piano to put one together, and can command capital enough to buy the parts of one instrument, may boldly fling his sign to the breeze, and announce himself to an inattentive public as a "piano-forte-maker." The only difficulty is to sell the piano when it is put together. At present it costs rather more money to sell a piano than it does to make one.

When the case is finished, all except the final hand-polish, it is taken to the sounding-board room. The sounding-board--a thin, clear sheet of spruce under the strings--is the piano's soul, wanting which, it were a dead thing. Almost every resonant substance in nature has been tried for sounding-boards, but nothing has been found equal to spruce. Countless experiments have been made with a view to ascertain precisely the best way of shaping, arranging, and fixing the sounding-board, the best thickness, the best number and direction of the supporting ribs; and every great maker is happy in the conviction that he is a little better in sounding-boards than any of his rivals. Next, the strings are inserted; next, the action and the keys. Every one will pause to admire

the hammers of the piano, so light, yet so capable of giving a telling blow, which evoke all the music of the strings, but mingle with that music no click, nor thud, nor thump, of their own. The felt employed varies in thickness from one sixteenth of an inch to an inch and an eighth, and costs \$5.75 in gold per pound. Only Paris, it seems, can make it good enough for the purpose. Many of the keys have a double felting, compressed from an inch and a half to three quarters of an inch, and others again have an outer covering of leather to keep the strings from cutting the felt. Simple as the finished hammer looks, there are a hundred and fifty years of thought and experiment in it. It required half a century to exhaust the different kinds of wood, bone, and cork; and when, about 1760, the idea was conceived of covering the hammers with something soft, another century was to elapse before all the leathers and fabrics had been tried, and felt found to be the *ne plus ultra*. With regard to the action, or the mechanism by which the hammers are made to strike the strings, we must refer the inquisitive reader to the piano itself.

When all the parts have been placed in the case, the instrument falls into the hands of the "regulator," who inspects, rectifies, tunes, harmonizes, perfects the whole. Nothing then remains but to convey it to the store, give it its final polish and its last tuning.

The next thing is to sell it. Six hundred and fifty dollars seems a high price for a square piano, such as we used to buy for three hundred, and the "natural cost" of which does not much exceed two hundred dollars. Fifteen hundred dollars for a grand piano is also rather startling. But how much tax, does the reader suppose, is paid upon a fifteen-hundred-dollar grand? It is difficult to compute it; but it does not fall much below two hundred dollars. The five per cent manufacturer's tax, which is paid upon the price of the finished instrument, has also to be paid upon various parts, such as the wire; and upon the imported articles there is a high tariff. It is computed that the taxes upon very complicated articles, in which a great variety of materials are employed, such as carriages, pianos, organs, and fine furniture, amount to about one eighth of the price. The piano, too, is an expensive creature to keep, in these times of high rents, and its fare upon a railroad is higher than that of its owner. We saw, however, a magnificent piano, the other day, at the establishment of Messrs. Chickering, in Broadway, for which passage had been secured all the way to Oregon for thirty-five dollars,--only five dollars more than it would cost to transport it to Chicago. Happily for us, to whom fifteen hundred dollars--nay, six hundred and fifty dollars--is an enormous sum of money, a very good second-hand piano is always attainable for less than half the original price.

For, reader, you must know that the ostentation of the rich is always putting costly pleasures within the reach of the refined not-rich. A piano in its time plays many parts, and figures in a variety of scenes.

Like the more delicate and sympathetic kinds of human beings, it is naught unless it is valued; but, being valued, it is a treasure beyond price. Cold, glittering, and dumb, it stands among the tasteless splendors with which the wealthy ignorant cumber their dreary abodes,--a thing of ostentation merely,--as uninteresting as the women who surround it, gorgeously appparelled, but without conversation, conscious of defective parts of speech. "There is much music, excellent voice, in that little organ," but there is no one there who can "make it speak." They may "fret" the noble instrument; they "cannot play upon it."

But a fool and his nine-hundred-dollar piano are soon parted. The red flag of the auctioneer announces its transfer to a drawing-room frequented by persons capable of enjoying the refined pleasures. Bright and joyous is the scene, about half past nine in the evening, when, by turns, the ladies try over their newest pieces, or else listen with intelligent pleasure to the performance of a master. Pleasant are the informal family concerts in such a house, when one sister breaks down under the difficulties of Thalberg, and yields the piano-stool to the musical genius of the family, who takes up the note, and, dashing gayly into the midst of "Egitto," forces a path through the wilderness, takes the Red Sea like a heroine, bursts at length into the triumphal prayer, and retires from the instrument as calm as a summer morning. On occasions of ceremony, too, the piano has a part to perform, though a humble one. Awkward pauses will occur in all but the best-regulated parties, and people will get together, in the best houses, who quench and neutralize one another. It is the piano that fills those pauses, and gives a welcome respite to the toil of forcing conversation. How could "society" go on without the occasional interposition of the piano? One hundred and sixty years ago, in those days beloved and vaunted by Thackeray, when Louis XIV. was king of France, and Anne queen of England, society danced, tattled, and gambled. Cards have receded as the piano has advanced in importance.

From such a drawing-room as this, after a stay of some years, the piano may pass into a boarding-school, and thence into the sitting-room of a family who have pinched for two years to buy it. "It must have been," says Henry Ward Beecher, "about the year 1820, in old Litchfield, Connecticut, upon waking one fine morning, that we heard music in the parlor, and, hastening down, beheld an upright piano, the first we ever saw or heard of! Nothing can describe the amazement of silence that filled us. It rose almost to superstitious reverence, and all that day was a dream and marvel." It is such pianos that are appreciated. It is in such parlors that the instrument best answers the end of its creation. There is many a piano in the back room of a little store, or in the uncarpeted sitting-room of a farm-house, that yields a larger revenue of delight than the splendid grand of a splendid drawing-room. In these humble abodes of refined intelligence, the piano is a dear and honored member of the family.

The piano now has a rival in the United States in that fine instrument before mentioned, which has grown from the melodeon into the cabinet organ. We do not hesitate to say, that the cabinet organs of Messrs. Mason and Hamlin only need to be as generally known as the piano in order to share the favor of the public equally with it. It seems to us peculiarly the instrument for men. We trust the time is at hand when it will be seen that it is not less desirable for boys to learn to play upon an instrument than girls; and how much more a little skill in performing may do for a man than for a woman! A boy can hardly be a perfect savage, nor a man a money-maker or a pietist, who has acquired sufficient command of an instrument to play upon it with pleasure. How often, when we have been listening to the swelling music of the cabinet organs at the ware-rooms of Messrs. Mason and Hamlin in Broadway, have we desired to put one of those instruments in every clerk's boarding-house room, and tell him to take all the ennui, and half the peril, out of his life by learning to play upon it! No business man who works as intensely as we do can keep alive the celestial harmonies within him,--no, nor the early wrinkles from his face,--without some such pleasant mingling of bodily rest and mental exercise as playing upon an instrument.

The simplicity of the means by which music is produced from the cabinet organ is truly remarkable. It is called a "reed" instrument; which leads many to suppose that the cane-brake is despoiled to procure its sound-giving apparatus. Not so. The reed employed is nothing but a thin strip of brass with a tongue slit in it, the vibration of which causes the musical sound. One of the reeds, though it produces a volume of sound only surpassed by the pipes of an organ, weighs about an ounce, and can be carried in a vest-pocket. In fact, a cabinet organ is simply an accordeon of immense power and improved mechanism. Twenty years ago, one of our melodeon-makers chanced to observe that the accordeon produced a better tone when it was drawn out than when it was pushed in; and this fact suggested the first great improvement in the melodeon. Before that time, the wind from the bellows, in all melodeons, was forced through the reeds. Melodeons on the improved principle were constructed so that the wind was drawn through the reeds. The credit of introducing this improvement is due to the well-known firm of Carhart, Needham, & Co., and it was as decided an improvement in the melodeon as the introduction of the hammer in the harpsichord.

At this point of development, the instrument was taken up by Messrs. Mason and Hamlin, who have covered it with improvements, and rendered it one of the most pleasing musical instruments in the possession of mankind. When we remarked above, that the American piano was the best in the world, we only expressed the opinion of others; but now that we assert the superiority of the American cabinet organ over similar instruments made in London and Paris, we are communicating knowledge of our own. Indeed, the superiority is so marked that it is apparent to the merest tyro in music. During the year 1866, the number of these

instruments produced in the United States by the twenty-five manufacturers was about fifteen thousand, which were sold for one million six hundred thousand dollars, or a little more than one hundred dollars each. Messrs. Mason and Hamlin, who manufacture one fourth of the whole number, produce thirty-five kinds, varying in power, compass, and decoration, and in price from seventy-five dollars to twelve hundred. In the new towns of the great West, the cabinet organ is usually the first instrument of music to arrive, and, of late years, it takes its place with the piano in the fashionable drawing-rooms of the Atlantic States.

Few Americans, we presume, expected that the department of the Paris Exposition in which the United States should most surpass other nations would be that appropriated to musical instruments. Even our cornets and bugles are highly commended in Paris. The cabinet organs, according to several correspondents, are much admired. We can hardly credit the assertion of an intelligent correspondent of the Tribune, that the superiority of the American pianos is not "questioned" by Erard, Pleyel, and Hertz, but we can well believe that it is acknowledged by the great players congregated at Paris. The aged Rossini is reported to have said, after listening to an American piano, "It is like a nightingale cooing in a thunder-storm."

Maple-Sugar-Making in Vermont

By J. M. French, M.D., from *The New England Magazine Volume 1, No. 3, March, 1886*
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The poet Saxe has written of his native State, that Vermont is noted for four staple products; oxen, maple-sugar, girls, and horses:--

"The first are strong, the last are fleet,
The second and third exceedingly sweet,
And all uncommon hard to beat."

Whatever changes may have taken place in other respects, in maple-sugar, at least, Vermont retains her preëminence, producing each year from eight to ten million pounds, or more than any other single State, and nearly one-third of the entire amount manufactured in the United States.

[Illustration: CATCHING SAP.]

To the farmer's boy among the Green Mountains the springtime is the sweetest and most welcome of all the seasons. And however far he may wander in later years from the scenes of his boyhood, yet often, in quiet hours or when busied with the cares of life, his thoughts return to the old homestead; and, as he walks again in the old paths, recalls the old memories, and watches the old-time pictures come and go before his mental vision, he enjoys again, and with a freshness ever new, the pleasures of the maple-sugar season.

Midwinter is past. The "January thaw" has come and gone, leaving a smooth, hard crust, just right for coasting. The heavy storms of February have piled the drifts mountain high over road and fence and wall; and the roaring winds of early March have driven the snow in blinding clouds along the hill-sides, through the forests, and down into the valleys. But now the coldest days are over, and the sun, in his returning course, begins to send down-rays of pleasant warmth. The nights are still sharp, and the March winds have not yet ceased to blow; but for a week, the snow has been melting at noon-day on the southern slope of the hills.

[Illustration: THE YOKE.]

One afternoon, when the sun seems a little warmer than usual, the farmer comes in to the house, on his return from a trip to the wood-lot, saying, "Boys, this is good weather for sap. We must get the buckets out, and be ready to tap the trees to-morrow."

The buckets are stored in the loft over the shed, or at the barn or in the sugar-house, where they were carefully laid away after last year's season was over. Now they must be washed and scalded, repaired if

necessary, and carried around to the trees.

Twenty-five years ago nearly all the buckets were made of pine or cedar, had wooden hoops, and were without covers. At present many of them are made of tin, and are provided with covers.

By night, with all hands at work, the buckets are washed and distributed. They are left in sets of half-a-dozen at convenient distances through the orchard, or else are turned bottom-upwards on the snow, one at the foot of each tree.

Sometimes it happens at this stage of the proceedings that a storm comes up unexpectedly, a cold spell follows, and operations are delayed accordingly. But, if the weather continues fine, the next day the trees are tapped.

[Illustration: GATHERING THE SAP.]

Armed each with a bit-stock and one-half or three-quarter-inch bit, the farmer and his older boys go from tree to tree, and, selecting a favorable spot a few feet from the ground, break off any rough pieces of outer bark, and bore a hole into the tree to the depth of one or two inches. Formerly a larger bit was used, and the bore was rarely more than an inch in depth; but experience has shown that the smaller and deeper bore injures the tree less and secures a larger quantity of sap.

Next the younger boys, acting as assistants, come forward with spouts and nails and buckets. The old style of spout consists of a wooden tube some five or six inches in length, tapered slightly at one end to fit the auger-hole, and with the upper half of the cylinder cut away down to an Inch from the point where it enters the tree. The new style, now largely used, is made of galvanized iron, is of smaller size, and has attached to it a hook on which to hang the bucket. Sometimes, also, spouts of tin are used, being driven into the bark just beneath the auger-hole.

After the spouts have been driven in, the buckets must be put in place and fastened there. If iron spouts are used they are already provided with hooks. If wooden or tin ones are used, instead, the common practice is to drive into the tree, a few inches below the spout, a nail made of wrought-iron, with a tapering point and thin head, and upon this to hang the bucket by means of its upper hoop; or, if the ground is level and the snow nearly gone, it is sometimes set upon the ground.

[Illustration: BOILING SAP--THE OLD WAY.]

At length the trees are tapped, the spouts and nails are driven, the buckets are set, and all is ready for the sap.

I remember once to have seen in an illustrated magazine a picture, one of a series intended to represent the process of sugar-making, in which the spouts were several feet in length, and the sap poured out in a rushing stream, as though each spout were a hose-pipe, and every tree a water-main. To carry out the idea, it would have required a man to stand at every tree and empty the rapidly filling buckets into a monster hogshead.

Not thus lavishly is this nectar of the gods poured out on our New England hills; but slowly, filtered through the closely wrought fibres of the *acer saccharinum*, absorbing new sweetness, and gaining a more delicate flavor at each step of its progress, until at last it falls drop by drop into the bucket. This is rarely filled in less than twenty-four hours, while three or four bucketfuls is an average yield for a season, and six a large one.

[Illustration: BOILING DOWN.]

Next the sugar-house is put in order, the arch is mended, the kettle or pan washed out, and all necessary preparations are made for boiling. The earliest method of boiling sap of which I have any recollection was in a huge caldron kettle suspended from a heavy pole, which was supported at each end by the limb of a tree or on top of a post. Then a huge log was rolled up to each side of the kettle, and the fire was built between them. This was known simply as the "boiling-place," and could be changed as often as convenient. The kettle which contained the sap was also open for the reception of the dust, and smoke, and falling leaves, and forms of dirt innumerable.

The first advance on this primitive method was made by building a rough arch of stone around the kettle to retain the heat and economize fuel. Next a rectangular pan of sheet-iron was substituted for the kettle, and a shed or rude house was built around the arch. The process of improvement has continued, until to-day in most of the larger orchards can be found neat and convenient sugar-houses, with closely-built arches of brick; while in place of the ancient caldron kettle, or the still much-used sap-pan, it is common to find the modern evaporator.

There are several patterns of evaporators in use. The most common one consists of a pan of from twelve to sixteen feet in length and four or five in width, divided into compartments by a series of partitions which run nearly across the pan, at intervals of six or eight inches, but at alternate ends stop three or four inches short of the side. Thus all the compartments are connected with each other in such a manner as to form one winding passage-way.

Back of the arch, and at one corner, stands a large hogshead containing sap, with a faucet at the bottom, and a small tube opening into the rear compartment of the evaporator. This tube has a self-acting valve, which

closes when the sap has reached the proper height in the pan, and opens again when it has been lowered by boiling.

When the sap is first turned on it at once runs through the entire passage-way, and covers the bottom of the pan. Thenceforward it enters slowly, and is heated gradually in the rear compartments, while the boiling is confined to the front portion of the pan.

The density of this boiling portion of the liquid is constantly increased by evaporation; and the fresh sap, instead of mixing intimately with the boiling mass, acts as a pressure in the rear, forcing it steadily towards the front. Soon the different compartments of the evaporator present the saccharine fluid in all its phases, from fresh, cool sap, through warm, hot, and boiling, then partially concentrated, then thin syrup, then thicker, and, if the process be long enough continued, even down to sugar. It is customary, however, to draw it off through another faucet in front when it has reached the consistency of syrup.

In the smaller orchards, the sap is usually gathered in pails and brought directly to the central reservoir. For this purpose a sap-yoke is borne on the shoulders, with a large pail suspended from each end. In larger orchards, where the ground is not too rough, a barrel or hogshead is fastened upon a sled and drawn through the sugar-place by a yoke of oxen; or, if the ground slopes regularly, a system of spouts or pipes is sometimes arranged to bring the sap from convenient stations to the boiling-place.

It is roughly estimated that four gallons of sap will make one pound of sugar. But the sap varies greatly in sweetness, not only in different seasons, but in different parts of the same season, and in different trees at the same time. As a general rule, large and widely-branching trees produce sweeter sap than small and gnarled ones, as well as a much larger quantity. The first sap of the season is always the sweetest, and of the most delicate flavor, while late runs are of poorer quality, and have a "buddy" and bitter taste.

A drink from the buckets is considered a great treat at first, and, though it soon loses the charm of novelty, is always healthy and refreshing, and is the common drink of the sugar-camp during the entire season.

Sometimes, when the buckets are nearly full, there comes a cold snap, and the sap is turned to ice. But, however hard it may have frozen, there is always a central portion, small if the ice is thick, larger if thin, which is liquid still. This is pure, concentrated sweetness, maple honey unalloyed, though it never finds its way into the market.

So far all has been hard work, but now comes the boiling, and here the

poetry of sugar-making begins.

In those old days,--the halcyon days of youth,--after the sap was gathered, and the fuel piled high beside the arch, then it was that we sat down by the blazing fire and watched it burn; heaped on the logs, filled up the kettle, and again sat down to muse, or talk, or read. If the wind whistled afar, the boiling-place was in a sheltered nook; if the rain poured down, or the snow-flakes fell without, we were protected by the sugar-house or shed; if the day was cold the fire was warm; _and the heart of a youth is never cold_.

When the weather was fine, and the sap running fast, it was often necessary to spend a good part of the night in boiling sap. Instead of feeling this a burden, here we found our pleasures but intensified. How the bright blaze chased the dim shadows far back into the woods, and the black smoke rolled up in great clouds to the sky! How sweet and warm and refreshing was the sap as it grew more and more concentrated! And how welcome were the neighbors' boys when they came to share with us the midnight watch! There was many a thrilling story told, many a sprightly joke was cracked, or lively game of euchre played. And when the war-cloud gathered in the Southern horizon, it was there we talked of the latest news, and registered our patriotic vows.

When pans are used for boiling, the last thing before the work of the day is done is "syruping down." When the sap is all boiled in, and the product has attained a sufficient degree of concentration,--nearly equal to that of the "maple syrup" of the markets,--the fire is suffered to go down, the pan is drawn off, the syrup dipped out and strained through a flannel cloth, and stored away in pails or tin cans to await the final process of "sugaring off."

This event takes place after a few days of boiling, when the syrup has accumulated in sufficient quantities; and, as it presents the first fruits of the harvest, is usually made the occasion of a sugar-party. Now, the maple sugar-party is a New England institution, and the great feast of the season. The young people invite their friends, the neighbors' boys and girls, and sometimes a select party of school-mates from the village. The young folks go out through the woods in glee, the boys drawing the girls on sleds over the crust, the young men and maidens walking together,--a merry throng full of life and glee. The older folks are also there, at least sometimes; but their presence is no damper on the spirits of the young.

First, the pan is half filled with syrup, and a gentle fire is started. As the temperature rises, a thick scum appears on the surface, consisting of such impurities as may have passed through the meshes of the strainer. If proper care has been taken to keep out all forms of dirt in gathering and boiling, and if, after being strained, the syrup was allowed to stand and settle for two or three days, until all the

nitre,--or "sand," as it is called,--and other heavy impurities, were deposited on the bottom of the pail, then the liquid which is poured off is clear and light-colored. But if these precautions have not been taken, if dust, and leaves, and cinders have been allowed free access, then the liquid is dirty and dark-colored, and the scum is thick and muddy. In such cases it is customary to make use of some device for the purpose of "purifying" it, such as stirring a cup of milk or a beaten egg into the slowly heating mass. These things are supposed to have an affinity for the dirt, and to increase the volume of impurities which rise to the surface. Their real utility is questionable.

When the liquid begins to simmer slightly, and just before it fairly boils, all the scum is removed by means of a long-handled skimmer, and is emptied into the pan with the "settlings," and both these are afterwards utilized in the manufacture of vinegar.

After boiling for a while, the syrup begins to thicken, and the bubbles to rise higher and higher in the pan, like boiling soap. Thenceforward it must be watched with care, to prevent its boiling over, or burning on the bottom of the pan.

As soon as the sugar begins to show signs of graining, all hands pass up their saucers to be filled; and they are refilled an unlimited number of times, until all are thoroughly sweetened. For though sugar is the product of hard labor, and has a cash value, yet in all the sugar-camps it is as free almost as water throughout the season,--until it is grained and in the tubs, when it becomes property, and is held sacred.

Not many, however, can eat more than one, or at most two, saucerfuls of warm sugar. So, when the appetite is sated with this, and the sugar is done a little harder, merry voices call for pans of snow, or if a clean snow-bank is at hand, betake themselves to this instead, and, after having partially cooled the liquid by stirring it in the saucer, pour it slowly out upon the smooth snow-crust, where it quickly hardens and becomes brittle, making a most luscious and toothsome substitute for molasses candy.

If the sugar is to be made into cakes it requires to be boiled longer than if intended for graining in tubs, as is the more common form.

Finally, when frequent trials show that the proper degree of concentration has been reached, the master of the ceremonies pronounces it "done," pulls off the fagots, and lets the fire go down, or else draws the pan off the arch and lets it cool. Then the sugar is stirred vigorously with a huge wooden paddle until it begins to grain, when it is poured out into the tubs, or dipped into tins, if intended for cakes.

But though the sugar is eaten, the party is not over for the young folks. There is still time for an hour or two of coasting--an

old-fashioned tournament of "sliding down hill." And so the livelong day is a time for sweet things said and done as well as eaten, of romping and frolicking, of mirth and laughter, of youthful courtships begun and carried on, of joy and gladness everywhere.

Sexual Relations

by Mahatma Gandhi, Translator: A. Rama Iyer, from *A Guide to Health* (1921)
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I would specially request those who have carefully read through the book so far to read through this chapter with even greater care, and ponder well over its subject-matter. There are still several more chapters to be written, and they will, of course, be found useful in their own way. But not one of them is nearly as important as this. As I have already said, there is not a single matter mentioned in this book which is not based on my personal experience, or which I do not believe to be strictly true.

Many are the keys to health, and they are all quite essential; but the one thing needful, above all others, is Brahmacharya. Of course, pure air, pure water, and wholesome food do contribute to health. But how can we be healthy if we expend all the health that we acquire? How can we help being paupers if we spend all the money that we earn? There can be no doubt that men and women can never be virile or strong unless they observe true Brahmacharya.

What do we mean by Brahmacharya? We mean by it that men and women should refrain from enjoying each other. That is to say, they should not touch each other with a carnal thought, they should not think of it even in their dreams. Their mutual glances should be free from all suggestion of carnality. The hidden strength that God has given us should be conserved by rigid self-discipline, and transmitted into energy and power,--not merely of body, but also of mind and soul.

But what is the spectacle that we actually see around us? Men and women, old and young, without exception, are seen entangled in the coils of sensuality. Blinded by lust, they lose all sense of right and wrong. I have myself seen even boys and girls behaving like mad men under its fatal influence. I too have behaved likewise under similar influences, and it could not well be otherwise. For the sake of a momentary pleasure, we sacrifice in an instant all the stock of vitality that we have accumulated. The infatuation over, we find ourselves in a miserable condition. The next morning, we feel hopelessly weak and tired, and the mind refuses to do its work. Then, we try to remedy the mischief by taking all sorts of 'nervine tonics' and put ourselves under the doctor's mercy for repairing the waste, and for recovering the capacity for enjoyment. So the days pass and the years, until at length old age comes upon us, and finds us utterly emasculated in body and in mind.

But the law of Nature is just the reverse of this. The older we grow, the keener should grow our intellect also; the longer we live, the greater should be our capacity to transmit the fruits of our accumulated experience to our fellowmen. And such is indeed the case with those who have been true Brahmacharies. They know no fear of death, and they do

not forget good even in the hour of death; nor do they indulge in vain complaints. They die with a smile on their lips, and boldly face the day of judgment. They are the true men and women; and of them alone can it be said that they have conserved their health.

We hardly realise the fact that incontinence is the root-cause of all the vanity, anger, fear and jealousy in the world. If our mind is not under our control, if we behave once or more every day more foolishly than even little children, what sins may we not commit consciously or unconsciously? How can we pause to think of the consequences of our actions, however vile or sinful they may be?

But you may ask, "Who has ever seen a true Brahmachary in this sense? If all men should turn Brahmacharies, would not humanity be extinct, and the whole world go to rack and ruin?" We will leave aside the religious aspect of this question, and discuss it simply from the secular point of view. To my mind, these questions only bespeak our weakness and our cowardliness. We have not the strength of will to observe Brahmacharya, and, therefore, set about finding pretexts for evading our duty. The race of true Brahmacharies is by no means extinct; but, if they were to be had merely for the asking, of what value would Brahmacharya be? Thousands of hardy labourers have to go and dig deep into the bowels of the earth in search of diamonds, and at length they get perhaps merely a handful of them out of heaps and heaps of rock. How much greater, then, should be the labour involved in the discovery of the infinitely more precious diamond of a Brahmachary? If the observance of Brahmacharya should mean the ruin of the world, why should we regret it? Are we God that we should be so anxious about its future? He who created it will surely see to its preservation. It is none of our business to enquire if other people practise Brahmacharya or not. When we turn merchant or lawyer or doctor, do we ever pause to consider what the fate of the world would be if all men were to do likewise? The true Brahmachary will, in the long run, discover for himself answers to such questions.

But how can men engrossed by the cares of the material world put these ideas into practice? What shall the married people do? What shall they do who have children? And what shall be done by those people who cannot control their lust? The best solution for all such difficulties has already been given. We should keep this ideal constantly before us, and try to approximate to it more and more to the utmost of our capacity. When little children are taught to write the letters of the alphabet, we show them the perfect shapes of the letters, and they try to reproduce them as best they can. Just in the same way, if we steadily work up to the ideal of Brahmacharya, we may ultimately succeed in realising it. What if we have married already? The law of Nature is that Brahmacharya may be broken only when the husband and wife feel a strong desire for a child. Those who, remembering this law, violate Brahmacharya once in four or five years cannot be said to be slaves to

lust, nor can they appreciably lose their stock of vitality. But, alas, how rare are those men and women who yield to the sexual craving merely for the sake of an offspring! The vast majority, who may be numbered in thousands, turn to sexual enjoyment merely to satisfy their carnal passion, with the result that children are born to them quite against their will. In the madness of sexual passion, we give no thought to the consequences of our acts. In this respect, men are even more to blame than women. The man is blinded so much by his lust that he never cares to remember that his wife is weak and incapable of rearing a child. In the West indeed, people have trespassed even against the claims of common decency. They indulge in sexual pleasures, and devise measures in order to evade the responsibilities of parenthood. Many books have been written on this subject, and a regular trade is being carried on in providing the means of preventing conception. We are as yet free from this sin, but we do not shrink from imposing the heavy burden of maternity on our women, and we are not concerned even to find that our children are weak, impotent and imbecile. Every time we get children, we bless Providence, and so seek to hide from ourselves the wickedness of our acts. Should we not rather deem it a sign of God's anger to have children who are weak, sensual, crippled and impotent? Is it a matter for joy that mere boys and girls should have children? Is it not rather a curse of God? We all know that the premature fruit of a too young plant weakens the parent, and so we try all means of delaying the appearance of fruit. But we sing hymns of praise and thanks-giving to God when a child is born of a boy-father and a girl-mother! Could anything be more dreadful? Do we think that the world is going to be saved by the countless swarms of such impotent children endlessly multiplying in India or elsewhere in the world? Verily we are, in this respect, far worse than even the lower animals; for, the bull and the cow are brought together solely with the object of having a calf. Man and woman should regard it as sacred duty to keep apart from the moment of conception up to the time when the child has ceased to suck its mother's breast. But we go on in our merry fashion blissfully forgetful of this sacred obligation. This incurable disease enfeebles our mind and leads us to an early grave, after making us drag a miserable existence for a short while. Married people should understand the true function of marriage, and should not violate the law of Brahmacharya except with a view to having a child for the continuation of the race.

But this is so difficult under our present conditions of life. Our diet, our ways of life, our common talk, and our environments are all equally calculated to rouse and keep alive our sensual appetite; and sensuality is like a poison, eating into our vitals. Some people may doubt the possibility of our being able to free ourselves from this bondage. This book is written not for those who go about with such doubtings of heart, but only for those who are really in earnest, and who have the courage to take active steps for their improvement. Those who are quite content with their present abject condition may even be offended to read all this; but I hope this will be of some service to those who are heartily

disgusted with their own miserable existence.

From all that has been said, it follows that those who are still unmarried should try to remain so; but, if they cannot help marrying, they should do so as late as possible. Young men, for instance, should take a vow to remain unmarried till the age of 25 or 30. We shall not explain here all the benefits other than physical that result from this; but those who want to enjoy them can do so for themselves.

My request to those parents who may read these pages is that they should not tie a mill-stone round the necks of their sons by marrying them in their teens. They should look also to the welfare of their sons, and not only to their own interests. They should throw aside all silly notions of caste-pride or 'respectability', and cease to indulge in such heartless practices. Let them, rather, if they are true well-wishers of their children, look to their physical, mental and moral improvements. What greater disservice can they do to their sons than compelling them to enter upon a married life, with all its tremendous responsibilities and cares, even while they are mere boys?

Then again, the true laws of health demand that the man that loses his wife, as well as the woman that loses her husband, should remain single ever after. There is a difference of opinion among doctors as to whether young men and women need ever let their vital fluid escape, some answering the question in the affirmative, others in the negative. But this cannot justify our taking advantage of it for sensual enjoyment. I can affirm, without the slightest hesitation, from my own experience as well as that of others, that sexual enjoyment is not only not necessary for the preservation of health, but is positively detrimental to it. All the strength of body and mind that has taken long to acquire, is lost altogether by the escape of the vital fluid, and it takes a long time to regain this lost strength, and even then there is no saying that it can be thoroughly recovered. A broken vessel may be made to do its work after mending, but it can never be anything but a broken vessel.

As has already been pointed out, the preservation of our vitality is impossible without pure air, pure water, pure and wholesome food, as well as pure thoughts. So vital indeed is the relation between our health and the life that we lead that we can never be perfectly healthy unless we lead a clean life. The earnest man who, forgetting the errors of the past, begins to live a life of purity will be able to reap the fruit of it straightway. Those who have practised true Brahmacharya even for a short period will have seen how their body and mind improve steadily in strength and power, and they will not, at any cost, be willing to part with this treasure. I have myself been guilty of lapses even after having fully understood the value of Brahmacharya, and have, of course, paid dearly for it. I am filled with shame and remorse when I think of the terrible contrast between my condition before and after these lapses. But from the errors of the past I have now learnt to

preserve this treasure in tact, and I fully hope, with God's grace, to continue to preserve it in the future; for I have in my own person, witnessed the inestimable benefits of Brahmacharya. I was married early in life, and had become the father of children as a mere youth. When, at length, I awoke to the reality of my situation, I found myself sunk in the lowest depths of degradation. I shall consider myself amply rewarded for writing these pages if at least a single reader is able to take warning from my failings and experiences, and to profit thereby. Many people have told me (and I also believe it) that I am full of energy and enthusiasm, and that my mind is by so means weak; some even accuse me of rashness. There is disease in my body as well as in my mind; nevertheless, when compared with my friends, I may call myself perfectly healthy and strong. If even after twenty years of sensual enjoyment, I have been able to reach this state, how much better should I have been if only I had kept myself pure during those twenty years as well? It is my full conviction that, if only I had lived a life of Brahmacharya all through, my energy and enthusiasm would have been a thousandfold greater and I should have been able to devote them all to the furtherance of my country's cause as of my own. If this can be affirmed of an ordinary man like myself, how much more wonderful must be the gain in power,--physical, mental, as well as moral--that unbroken Brahmacharya can bring to us!

When so strict is the law of Brahmacharya, what shall we say of those guilty of the unpardonable sin of illegitimate sexual enjoyment? The evil that arises from adultery and prostitution is a vital question of religion and morality and cannot be fully dealt with in a treatise on health. Here we are only concerned to point out how thousands who are guilty of these sins are afflicted by syphilis and other unmentionable diseases. The inflexible decree of Providence happily condemns these wretches to a life of unmitigated suffering. Their short span of life is spent in abject bondage to quacks in a futile quest after a remedy that will rid them of their suffering. If there were no adultery at all, there would be no work for at least 50% of doctors. So inextricably indeed has venereal disease caught mankind in its clutches that even the best doctors have been forced to admit that, so long as adultery and prostitution continue, there is no hope for the human race. The medicines for these diseases are so poisonous that, although they may appear to have done some good for the time being, they give rise to other and still more terrible diseases which are handed down from generation to generation.

In concluding this chapter, we will briefly point out how married people can preserve their Brahmacharya intact. It is not enough to observe the laws of health as regards air, water and food. The man should altogether cease to sleep in privacy with his wife. Little reflection is needed to show that the only possible motive for privacy between man and wife is the desire for sexual enjoyment. They should sleep apart at night, and be incessantly engaged in good works during the day. They

should read such books as fill them with noble thoughts and meditate over the lives of great men, and live in the constant realisation of the fact that sensual enjoyment is the root of all disease. Whenever they feel a prompting for enjoyment, they should bathe in cold water, so that the heat of passion may be cooled down, and be refined into the energy of virtuous activity. This is a hard thing to do, but we have been born into this world that we might wrestle with difficulties and temptations, and conquer them; and he who has not the will to do it can never enjoy the supreme blessing of true health.

Natural Setting and Flora and Fauna of Miami

by Workers of the Writers 9 Program of The Works Project Administration, from *Planning Your Miami Vacation* (1941)

MIAMI, stretching for 15 miles along the shore of Biscayne Bay on the southeastern coast of the Florida peninsula, lies in approximately the same latitude as Calcutta, India, and the hot, arid regions of the Sahara Desert, but its climate partakes of the nature of neither of those places. As in other extended level areas, the twilight interval is brief and night closes in abruptly. Throughout the year, average seasonal temperature changes in Miami are so slight that the terms "winter" and "summer" have little significance and these seasons, differentiated by the amount of their rainfall, are more aptly called "rainy" and "dry." With these exceptions, Miami's climate is without parallel among cities bordering on the tropics.

The average annual rainfall is 65.5 inches, three-fourths of which falls during the rainy season extending from May through October. At least half of this annual supply is absorbed by the soil to become the chief source of the city's underground water supply. Most of the precipitation comes in the form of sudden showers lasting from a few minutes to an hour and usually confined to small areas having sharply defined edges. The heaviest rains occur in early summer and in the fall during the period of the equinoctial storms. During a 24-hour period, 15.10 inches of rain fell in Miami when a hurricane swept from the lower west coast and passed off the upper east coast in November 1935.

The tropical hurricane, a distinctive type of storm growing out of unusual atmospheric conditions, is known to scientists as a thermo-convective cyclone. In the Northern hemisphere most of these storms occur during August, September and October and their destructive effects are felt in the states bordering the Gulf of Mexico and the Atlantic seaboard.

Because tropical hurricanes degenerate rapidly and lose their characteristic form when they move inland, study of hurricane conditions is incomplete and little is known concerning their origin and development. Recent meteorological observations indicate that they may form anywhere above five to six degrees from the equator in regions of light winds, abnormal temperatures, and a high atmospheric moisture content. The first sign is a more or less clustered group of thunderstorms characterized by slightly subnormal pressures. Near the center of a large thunderstorm a vortex takes form, gains in size, and, accompanied by excessive rains, gathers momentum until winds of gale force are frequently reached.

The whirling wind is sucked toward the center of the vortex where, warmed by condensation, it rises and flows out to be replaced by moisture-laden air from outside the storm. It is this heat, liberated near the center which maintains the structure of the hurricane.

The circular movement of the air attains, near the center, a velocity that involves extremely low pressures. This creates a downward movement of air which forms an "eye," or clear zone in the center. The eye, from five to 50 miles in diameter, is usually without clouds and within it, the air is calm.

Outside the clear zone, the winds, mounting to tremendous speed, are accompanied by torrential rains that merge with the spume blown from mountainous wave crests until, over hundreds of square miles, the air is filled with driving water.

Once established, this storm system moves slowly, first west and then northwest, after which, if it is not disturbed, it "recurves" to the north and finally to a northeasterly direction apparently moving around the westward side of the usual oceanic area of high pressure. Variations in atmospheric conditions, however, tend to give these storms erratic paths. For instance, a hurricane reaching the Gulf of Mexico will not move eastward unless a low pressure trough over the Atlantic States favors its recurvature.

If the hurricane moves inland, it encounters conditions unfavorable for the maintenance of its structure. The increased friction decreases its wind velocity, the moisture supply on which it depends for energy becomes restricted, and consequently the eye fills up as the wind system gradually collapses.

Since, during the past 60 years only one tropical hurricane of major intensity reached Miami, that of September, 1926, these disturbances are counterbalanced by the equability of other climatic factors.

The city, lying in the trade wind belt, is favored by an almost constant breeze from the east. These prevailing winds, tempered as they pass over the broad expanse of the nearby Gulf Stream, give Miami an average temperature of 68 in winter and 82 in summer. Extreme variations are so rare that heat prostrations are unknown. Between 1930 and 1940 temperatures in excess of 90 have been reached but five times.

The air, uncontaminated by gases, smoke, or dust, does not favor the formation of fog. Such fogs as have been observed occur in the early morning, averaging about two days a year, and are rapidly dissipated by the rising sun. Coupled with the character of the prevailing showers, these conditions give Miami an unusual amount of

sunshine. Since 1895 there has been recorded an average of but six sunless days a year.

Despite its favorable climate, the territory in the immediate vicinity of Miami is not adapted for general agricultural development. The whole area is located on a limestone formation, known as Miami colite containing as much as 95% of calcium carbonate, which extends from north of Broward County southward and southwestward along the coast to Cape Sable and across the shallow water to the Keys. Nowhere more than 25 feet above sea level, it contains many swampy areas, known as glades, some of which extend into the Everglades.

Because of its porous nature, this rock is subject to the dissolving action of water and has developed many curious formations. Arch Creek, north of the city, flows under a natural bridge which forms part of a highway. In another section, now covered by buildings, construction gangs removed the sand for railroad ballast, revealing an area honeycombed with vertical pits a foot or two in diameter. West of the city are several large caverns containing numerous stalactites.

This colite lies close to the surface and is frequently uncovered in wide areas. It hardens when exposed and has been found satisfactory for road materials, building blocks, and as a source of hydrated lime.

There is sufficient humus in the interstices to support considerable vegetation as is evidenced by the numerous outcroppings dominated by pines and wire grass. The pines are used locally for lumber and fuel but not for turpentine. The wiregrass areas might be used for grazing but the jagged rocky surfaces make this impossible.

South of Miami, in the Redlands section, these pine lands have been cleared, the surface scarified, and planted principally to citrus fruits. The lower ground toward the east has been drained and is intensively cultivated, potatoes and tomatoes being the chief crops. Water control has likewise made the rich, productive muck lands north and northwest of the city available for diversified truck farming.

South and west of Miami in the Dade County section of the Everglades is an almost inexhaustible supply of peat. It compares favorably with that used for fuel in other parts of the world but labor costs prohibit commercial production. At present it is used principally as a filler for nitrogenous fertilizers. In prolonged dry seasons it becomes easily ignited and thousands of acres of this valuable material have been destroyed by fire as the result of carelessness on the part of hunters or sightseers.

The Everglades, formerly a Seminole battleground and refuge for rum-runner, black-birder, outlaw, and fugitive, has almost disappeared as the result of vast reclamation projects instituted by the state and Federal governments. This whole section was once a wet prairie, covering a strip 150 miles long and 55 miles wide, lying in a basin between two rock ridges. In some places the water had cut channels through these ridges but the fall was too slight for complete drainage. Since the annual rainfall over this territory averaged over five feet, and because it received the annual overflow from Lake Okeechobee, most of it was covered with water for 12 months in the year. Even in dry seasons the water was three feet deep in many places.

Scattered throughout this expanse of water were patches of higher ground called "hammocks" that were dry at all seasons and whose soil, being very productive, was gardened by the Indians. The lower, inundated lands were overgrown with a rank, almost impenetrable, growth of coarse grass having serrated edges from which it was named "saw grass."

A deposit of muck, rich in nitrogen content and enormously productive especially as regards foliage crops, covers most of the Everglades in a layer that varies from two feet in depth at the edges to as much as 20 feet in the middle. Experiments show that with proper drainage and fertilization these muck lands can be made suitable for many crops.

Reclamation of these swamp lands has been based on drainage systems of which the numerous canals in the vicinity of Miami are a part. Lowering the water table has reduced much of the adjacent territory to a desolate waste but not without benefit to the city. It has not only wiped out the breeding places of salt-marsh mosquitoes but the canals are navigable for small boats and provide anchorage for the numerous cruisers, large and small, that are brought to the city each season. The Miami and Comfort Canals, which are a continuation of the forks of the Miami River; the Little River Canal, an extension of Little River, also a natural waterway; and the Biscayne, the Coral Gables, and the Tamiami Canals are part of a vast network draining a back country that has been called "The Nation's Sugar Bowl."

All the canals empty into Biscayne Bay, a small body of water, approximately 40 miles long, which forms part of the connecting water routes extending along the Atlantic coast from Boston, Mass., around the southern tip of the Florida peninsula and ending at Rio Grande, Texas. This sheltered passage, approximately 3,000 miles in length, is known as the Intracoastal Waterway. It had its beginning in surveys made by George Washington in 1763 but the project did not reach active development until 1911. The Norfolk-Key West

section was completed in 1936.

Long before the Christian era, scholars in India spoke of a "Beam of Torture" or the "Beam of Crucifixion," referring to a constellation or cluster of stars arranged in the form of a Roman cross. The poet Dante called this group the "consecrated stars." It became involved in romantic folklore, legends, and religion. It has been credited with inspiring the Spanish and Portuguese to settle under its influence. This brilliant constellation, the Southern Cross, is visible in Miami during February, March and April. In the latitude of Miami, 25 48', it appears very low on the southern horizon and may be observed from points as far north as latitude 27 degrees.

MIAMI'S FRUITS AND FLOWERS

THE FLORA of the Miami region is essentially tropical in character but it includes many plants common to both the Middle and

South Atlantic States. From the Keys and Cape Sable to the head of Biscayne Bay, the terrain is marked by a great diversity of soils which gives rise to a large variety of plants and, at the same time, sharply delineates the usual confines of the several plant associations. These areas of local distribution of plant species are known as "pinelands," "hammocks," and "Everglades." In addition, the waters of Biscayne Bay and the dunes along the coast have a vegetation that is peculiarly their own.

Palms, especially the coconut palm, are more widely planted in Miami than any other tree. Its usually curved trunk is topped with a rosette of leaves that bend outward and at the tips, abruptly downward. In tropical America the coconut often grows to a height of 100 feet, yields about 100 nuts a year, and supplies food, shelter, and clothing. It is less important in the latitude of Miami where its commercial use has been supplanted by its ornamental value.

The royal palm is another widely planted pinnate-leaved palm that thrives only in the southern part of the state. Its gray, spindle-shaped trunk, like a pillar of cement, is straight and topped by a long, green, cylindrical, sheathing base for the leaves. Long lanes of this stately tree line Biscayne Boulevard northward from Bayfront Park.

Another common tree belonging in this group is the Washingtonian or "petticoat" palm distinguished by a dense sheathing of dead leaves hanging downward along its upper trunk.

Scattered widely over vacant lots throughout the city on dry or pineland soils is the scrub palmetto. Although these dry soils are

frequently swept by fires, the underground stem of this palm protects it against damage.

The Australian pine, widely planted in the past as an ornamental tree, grows tall and plume-shaped. It may be pruned into almost any shape for use in formal gardens, as in the old Royal Palm Hotel gardens at Southeast Second Avenue and Second Street.

The native Caribbean pine, scattered over much of the undeveloped lands in and about Miami, is distinguished by its rough, branchless trunk and rounded but ragged looking top.

Rows of young almond trees adorn both sides of Seventeenth Avenue north of Miami River. The large leaves, growing close to long slender branches radiating horizontally from the trunk, take on a rich, red color in cool weather.

A baobab tree, (*dansonia digitata*) imported from Africa in 1912 stands in Columbia Park in front of the Miami Senior High School. The trunk of this specimen is beginning to acquire the characteristic bulge for which it is noted in its native habitat. A rarity in Florida, this tree, late in summer, bears huge creamy white blossoms that are remarkable for their strange shape.

South of Miami River, Brickell Avenue as far as Fifteenth Road, is lined with black olive trees, an importation from Jamaica. The black olive is a rapid grower with small, dark-green leaves forming a fine, round-topped tree something like the sugar maple. Older trees of this variety border Lummus Park on Northwest Third Avenue between Second and Third Streets.

Brickell Avenue, which extends southward to the James Deering estate, was originally cut through a hammock covered with a dense jungle growth. Many fine specimens of the gumbo limbo, the strangler fig, and the live oak may be observed in this area.

The gumbo limbo, sometimes known as West Indian Birch, has smooth copper-colored bark that may be peeled off in thin sheets. Glue and varnish are obtained from the tree which also yields an aromatic gum.

The strangling or strangler fig (*ficus aura*), belonging to the same genus as the edible fig and rubber trees, derives its name from its peculiar habit of growth. It may start from a seed germinating in the ground but, since the fruit is favored by birds, the seeds are frequently lodged in the bark of some forest tree, often the cabbage palm. In such cases the seed sends to the ground slender roots that branch, grow, and merge with one another, until the trunk of its host is completely encased and eventually killed. This fig, like the

wild banyan (*altissima*) seen along the newly landscaped Coral Way, drops aerial roots that become props for the lower limbs. The leaves of the fig are narrowed at the base; those of the wild banyan are rounded.

The majestic, wide-spreading live oak (*quercus virginiana*) frequently draped with Spanish moss, is the largest member of the beech family and is usually confined to hammock lands. It is distinguished from the smaller myrtle-leaved oak (*quercus myrtifolia*), which also grows in hammocks, by its larger leaves and nuts.

South Miami Avenue, just west of Brickell Avenue, is lined on both sides for a considerable distance with royal poinciana trees. In June their spreading, umbrella-shaped tops are transformed into canopies of flaming scarlet blossoms. The center parkway of this avenue is planted with Phoenix or date palms.

Near the James Deering estate on Miami Avenue is a planting of Spanish bayonets. The plant has no trunk; the strong leaves are clustered at the base, diverge, and terminate in sharp points. The flowers, about three inches across, are borne on stems from three to ten feet tall and apparently attract only one insect, the yucca moth. This moth lays eggs in the capsule and crowds collected masses of pollen into the stigma, thus fertilizing the ovules. The larva uses a few of the seeds for food, spins a thread to the ground, enters the pupa state, and emerges as a moth when the flower blooms again the following year.

Among the climbing plants is the flame vine, a native of Brazil, which is widely planted throughout the city and especially in Coral Gables. Its light-green foliage and brilliant clusters of deep pink flowers, appearing in early winter make it easily recognizable. Another vine is the bougainvillea, a woody, thorny plant adapted for many uses. The purple varieties, strong and dense of growth, lending themselves to mass effects, are easily trained, and often used for hedges. The red varieties, are more effective when trained against a white background. They are frequently used to soften the effect of barren wall areas, especially at Miami Beach. Other common ornamental vines are the yellow allamanda and the thumbergia with lavender-blue orchid-like flowers.

Of the shrubs, the hibiscus or rose mallow, is more widely planted than any other excepting, possibly, the croton. Three varieties of hibiscus are popular, the (*H. rosa sinensh*) being the most common. This native of China is a vigorous shrub or small tree adapted for hedges but is often planted singly. The petals are rose-red. A smaller variety (*H. Sabdariffa*) has dark red flowers. The *H. cannabinus*, more difficult to cultivate, has white or pink, sometimes darker colored petals, that shade to purple at the base.

The croton, a shrub from one to six feet in height, is a member of the spurge family, a group remarkable for its foliage rather than its flowers. The leaves of the cultivated croton are generally green, often splashed with brown, red, or yellow in varying shades. Rare plants, especially new cuttings, sometimes have yellow leaves. One plant may put forth leaves that are erect, broad, and wrinkled; another may have smooth, drooping leaves that are less than a quarter inch across. The "corkscrew" croton is marked by the twisting habit of its leaves.

The plants of the spurge family, like the croton and the poinsettia, often have a milky sap and yield a variety of products including edible fruits, medicines, poisons, and rubber. The cultivated poinsettia, a woody plant with dark green leaves and scarlet bracts, has a group of less conspicuous relatives sometimes called "wild poinsettias," or "hypocrites." They are smaller plants that show the same brilliantly colored bracts and may be found on pineland or in gardens.

Another common shrub is the oleander which sometimes reaches a height of 30 feet or more and is found along boulevards and in gardens everywhere. Collins Canal at Miami Beach is bordered with oleanders having pink blossoms but other varieties show colors including white, rose, and red. A native of the Levant, the oleander is a member of the dogbane family.

Many plants of this family are poisonous as the termination "bane" indicates. The pink and the white periwinkle, growing unnoticed in back yards or vacant lots, belongs to this group. The blue periwinkle of Europe, often planted in the North, is sometimes called "the flower of death."

After the sun goes down, the small white blossoms of the night-blooming jasmine, closely related to the well-known yellow jessamine, send out a penetrating odor of cloying sweetness. This plant also belongs to a family of poisonous plants. Its Asiatic cousin, *Strychnos nux-vomica*, yields strychnine and another supplies the virulent poison for the arrows of savage hunters.

Among the commoner air plants is Spanish moss which, besides softening the beauty of rugged live oaks, is the source of a "vegetable hair" used to fill mattresses. Spanish moss is not a parasite. It has no roots but takes its food from rain and air by means of hairlike structures. It belongs to the pineapple family as do also the wild pines which, having clustered leaves, are more characteristic of the cultivated pineapple. The leaves, at their bases, catch rainwater and dust on which the plant feeds.

The phlox, petunia, marigold, sweet pea, and a host of other flowers that flourish in the North in June, bloom in Miami during the winter months. These annuals of the temperate zone are really the exotics of this tropical area but they may be successfully grown by careful tending.

Miami is the meeting place of the plant zones. Southward extends a country that, in its natural state, becomes increasingly tropical in types of vegetation. The Everglades has a flora that is peculiarly its own and northward the plant life changes to that of the south-temperate zone.

Although most of the rainfall occurs during the summer, there is sufficient precipitation together with a relatively warm temperature during the winter to remove seasonal habits and extend the growing and flowering time throughout the year.

The zone of Florida fauna begins in the Everglades west of Miami and occupies the remainder of the peninsula, while the mainland, or north Florida, lies in the zone of Louisiana fauna. What is designated as the tropical life zone is contained in a narrow strip of land extending from Jupiter southward along the lower east coast, including only a small portion of the Everglades and lower west coast.

Much of the tropical zone is coastal land or low, marshy ground in which water birds abound. Besides the gulls and active little sandpipers, the most common water birds are the brown pelicans. Their nearest breeding places are Cape Sable and Brevard Island.

The flamingo, vermilion scarlet in color, with a wingspread of five feet, once common in Southern Florida, is seldom seen out of captivity.

Dr. J. B. Holder, author of *Along the Florida Reef* (1871), observed many "snake birds" on his trip to this area, which dived and disappeared when approached. He decided that they plunged to the bottom where they grasped weeds to hold themselves under until danger had passed. These strange birds, known as water turkey, snake bird, and American darter, swim with their bodies submerged, only the long slender neck and serpentine head showing. The plumage of the male is a glossy greenish black, with its broad tail tipped with pale brown. The female has much the same coloring, but her head, neck, and breast are grayish buff. They are seen perching in low trees or bushes overhanging the water from which they feed.

The egrets, now rigidly protected, are becoming more plentiful. The "aigrettes" for which they were hunted are long white plumes resembling spun glass, that grow out from the bird's back during

nesting season. Their gregarious habits make them easy prey for hunters but their slaughter left the young birds to die.

Egrets, herons, and cranes inhabit the swamps and edges of the canal along the Tamiami Trail. With them in the Everglades is the ibis, held by the ancient Egyptians as sacred to Thoth, god of wisdom. Wild turkey and quail are found in the Everglades, but the crow and vulture are much more common.

Wild hogs, once common to the prairies, are said to have been descended from animals imported by Spanish exploring parties. When President-elect Herbert Hoover visited Brighton, to receive a delegation of Indians from the near-by reservation, the braves alone appeared. Their leader apologetically explained that wild hogs had been reported that morning and the women could not resist the opportunity to secure fresh pork for their tables.

There are no land animals or birds in Florida today, that have any great commercial value. They are preserved or protected either for sentiment, for study, or for sport, and for the less tangible economic value arising from the benefits obtained through a balanced natural life.

Although some forms of animal life are becoming scarce, the deeper Everglades is still a paradise for hunters. In October, 1933, William T. Belvin, former preacher and boilermaker of Fort Myers, returned from an exile in the Florida wilds where he voluntarily spent a year to prove that it was possible, even in these days, to live in primitive fashion. Belvin, who took with him neither clothes, tools, nor weapons, lived on fish and wild game which are the main foods of the Indians who now inhabit these same wilds.

Only two species of alligator are known to exist in the world. One is found in the region of the Yangtze Kiang River in China and the other in southeastern United States. The American species are thick, dark brown or black, sluggish animals that favor fresh water and spend much of their time basking in the sun on open banks or on logs. They grow to a length of 16 feet but specimens over 12 feet are now rare. Like most wild animals they recognize man as an enemy and, when approached, will attempt concealment by hiding in holes or "caves" which they dig in or near the water. They are not noisy except during the breeding season when the male utters a roar that may be heard a mile away. The female builds a crude nest six to eight feet in diameter, lays 20 to 40 eggs, and covers them deeply with vegetation that ferments and liberates heat which hatches the eggs after two months. The emerging young, about eight inches long, are usually taken for disposal to tourists but most of them die from want of proper care. In the Everglades they add nearly a foot to their length the first year. By the fifth year they average about

six feet and weigh approximately 70 pounds.

The crocodile inhabits the salt marshes of southern Florida and is a vicious animal that will often move to attack instead of hiding as does the alligator. The more active crocodile is grayish in color and has a triangular head with a pointed snout. It is the largest survivor of the reptile age.

Another survivor of life that swarmed in ancient oceans millions of years ago is the garfish or Everglades pike that throngs the waters of the Miami River and nearby canals. Like the reptiles, the vertebrae of the gar have ball and socket joints and the head moves on its neck independently of the body. The scales, so hard that fire may be struck from them with a piece of steel, form a veritable armor. These scales do not overlap but are laid side by side like metal plates and are fastened to each other with a system of hooks. It is said that pioneers used gar skin to cover wooden plows and that the savage Caribs, when they went to war, used this armor for breastplates.

The third staple of Indian diet, the gopher, is a land tortoise which, being composed mostly of shell and digestive organs, is little more appetizing than the gar. The shell of a full-grown gopher is 18 inches long but the Seminoles hunt them so assiduously that smaller specimens are the rule. They are found in dry, forested elevations where they excavate large burrows in the ground. In the vicinity of Miami, where the limestone rock lies very close to the surface, the gophers are adept at finding pot holes, or "sand seeps," in which they dig their underground homes. Numerous beetles, crickets, and even toads share these underground chambers which are often 20 feet long and reach a depth of eight or nine feet. The gopher burrow may be recognized by a low mound, a foot or more higher than the surrounding land, and extending to a diameter of 10 or 15 feet.

The banks of the Miami and adjoining canals still abound in snakes which are hunted both for their skins and for medicinal purposes. Only three poisonous snakes are known, the coral snake, the diamondback rattler, and the moccasin.

The moccasin, or cotton mouth, rarely found far from the water's edge, is a stout snake, about four feet long at maturity. When striking, its widely opened mouth shows cottony white. The body is a dark copperish brown and its lips usually marked with white. It is frequently found on a log or in a low bush, hanging over the water, ready to drop on some fish which it pursues under water with remarkable speed.

The coral snake, its body covered with brilliant rings of yellow, black and crimson, is smaller and although one of the deadliest, is

generally less dangerous because its fangs are shorter and it cannot strike so deeply.

Although game is less plentiful than it once was there are still deer, quail, and turkey for the sportsman. Bears climb and tear the tops out of palmettos to get at the tender cabbage. Indians trap muskrat, mink, otter, and raccoon for their fur. Panthers, which inhabit the desolate wastes, are rarely seen and still less often hunted. The lowly 'possum, also found in the Everglades, is the only North American animal that carries its young in a pouch.

Still less conspicuous than the game are the great land snails and their close cousins, the arboreal species that live in dense hammocks where shade, concealment, moisture, and abundance of food are favorable for their existence. They are rarely found in pinelands due, perhaps, to the frequent fires that sweep these areas. The common arboreal snail has a white shell marked with brown but the colors and patterns vary widely. In size the shell measures from one to one and one-half inches in diameter and up to two and one-half inches in length.

Within the city limits along the bayshore two species of crabs are encountered. The little fiddler crabs swarm in backwater mud flats where odorous, decaying vegetation provides food. Their name is derived from the peculiar motion which the male makes with his one large arm when threatened or disturbed.

The larger West Indian land crabs found from West Palm Beach to Cape Sable, are more annoying and destructive. Their wide-mouthed burrows and their attacks on tender plants make them a nuisance to gardeners. Automobiles kill thousands of them on hard-surfaced coastal roads every year and sometimes these casualties mean trouble for the motorist. One claw is greatly developed and sharp enough to puncture a tire. In a fight with another crab this great claw may be wrenched from the body without much harm but the slightest damage to its shell means death. They have been known to steal articles of clothing that unwary bathers leave on shore, even extending their efforts to shorts and shoes which they attempt to pull into their holes. In September, during what is believed to be the mating season, they leave their burrows in swarms and go on a wild, noisy spree, taking possession of yards and porches, clumsily clambering up walls, and filling the night with an everlasting clatter.

Sometimes the waves wash ashore the iridescent violet or blue inflated sac of the Portuguese man-of-war, a common marine animal that is often annoying to bathers. It resembles an elongated soap bubble topped with a crest which acts as a sail. Attached to the sac are a number of organs and tentacles, streamers often 40 or 50 feet long, some of which are provided with stinging or lasso cells

that inflict severe pain when contacted.

The Florida manatee, or sea cow, which attains a weight of 2,000 pounds, grazes on grass growing in shallow lagoons and estuaries along the coast. The rear limbs are missing and the fore limbs are broad flappers. Its skin is bare, except for scattered hairs while the muzzle is covered with bristles. Nursing mothers rise to the surface and, head and shoulders above water, hold the young manatee to their breasts in an almost human fashion.

Even the soil produces strange fauna. Captain Charles J. Rose, one of Miami's oldest pioneers, possesses a large copper kettle inlaid with gold, product of the Aztecs or Spanish artisans, which was completely imbedded in rock blasted from a canal bed near the mouth of the Miami River. This rock, sometimes known as "ojus," is the same as that which underlies all the Miami area and is formed from the calcareous secretion of marine zoophytes or corals. These minute organisms build continuously and, over a period of years, their work is readily noticed. A one-inch specimen placed under water by Dr. J. B. Holder, doubled in size in a year's time. The same writer observed that branch corals sometimes grew five or six inches in one year.

Three small animals, the five-lined skink, the scorpion, and the chameleon, are common to yards and gardens throughout the city. The Cuban and Jamaican chameleon often reach a length of 16 inches but ours rarely exceed six inches. These slender lizards, noted for their rapid color changes, live on insects and drink dew. Changes in color are due to changes in light, emotion, and temperature. On cool days they are usually a dull gray, on warm days a golden green. Exposure to direct sunlight induces a dull black but in darkness they take on a cream color. Fright tends to produce lighter shades, while anger deepens the hue of lighter areas.

Young skinks are marked by five longitudinal stripes and a tail of brilliant blue. These lizards are harmless, active, and difficult to capture. The female becomes brownish at maturity and reaches a length of seven inches. The male attains a length of 10 inches and acquires a head of blazing red.

In the tropics, the scorpion's sting is sometimes fatal but the scorpions found in the United States are not dangerous except to children when their sting may cause vomiting and convulsion. This crab-like creature, black or gray in color, has a long, segmented tail tipped with a slender, curved sting. When alarmed the tail is curved over its back and the sting points forward in a threatening manner. The poison has a paralyzing effect.

Another common resident in the garden shrubbery is the Florida cardinal, often called the redbird. The crested head and underparts of the male are deep vermilion; the female is rusty brown.

The Florida blue jay is a crested bird found in central and southern Florida. It is slightly smaller than the southern blue jay and the upper plumage, suffused with gray, has a less purplish cast. It has all the bad habits of the southern blue jay but is less wary and can be trained to eat from one's hand. A noncrested bird, the Florida jay, or "scrub" jay, is found in scrub lands and sand-pine areas. Its nape, rump, and wings are blue and it is easily recognized by its longer tail. The scrub jay is more of a songster than the Florida jay and is generally less noisy.

The mockingbird is soberly dressed but its cheery, rollicking song is the most prominent and best loved of southern birds. It is silent most of the fall and early winter but from January onward its persistent medley of calls, often interspersed with imitations of other birds, make it easy to recognize. So great are its powers of imitation that birds kept in captivity have been known to mimic cats, dogs, and chickens. Morning is its favorite time for singing but it often wakes at night when the moon is bright to pour a cascade of silvery notes into the starry silence.

Recognizing the beauty of its song, the Senate designated the mocking bird as the State Bird of Florida by a resolution passed April 23, 1927. Evidence pointing to a weakness in character has been gathered by the late Dr. Charles T. Simpson, noted author and student of wild life who observed mockingbirds become intoxicated when they eat berries of a plant bearing the name, *solanum seaforthianum*.

Inroads of civilization and drainage of the Everglades have greatly reduced the abundance of all kinds of animal life in Dade County. Alligators have been hunted relentlessly. The flamingo, once common, is now rarely seen except in captivity. In 1892 one man reported that he had shipped 130,000 birds out of the state for millinery purposes. Birds were hunted to such an extent that a colony of hunters, located on the Keys, won the name of "Redbird City." Many birds, such as the egret, barely escaped the fate of the wild pigeon.

The enactment of game laws and the work of the National Association of Audubon Societies resulted in the preservation of these birds and other forms of animal life. The Florida Federation of Women's Clubs secured the establishment of Royal Palm State Park, a sanctuary of 1,920 acres in Dade County.